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# IRRIGATION CATALOGUE

APRIL 2016

PIPE
FITTINGS
SPRINKLERS
VALVES
LANDSCAPE
FOUNTAINS AND LAKES
FILTRATION
AGRICULTURE
PUMPS
FERTIGATION

CERTIFICAZIONE DI SISTEMA QUALITÀ
DNV·GL
ISO 9001

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# a

# PIPES

# PIPES

## ▶ HIGH DENSITY POLYETHYLENE PIPE

**POLYETHYLENE PIPE PE 100**
For conveying pressurized drinking water and industrial application.
According to with the **UNI EN 12201, UNI EN ISO 15494, ISO TR 10358, UNI EN 1622** norms and in accordance with the prescriptions of the decree nr 174 dated 06/04/04 (Official Gazette nr 166 dated 17/04/04) of the Ministry of health, concerning the materials used in the transport of the water intended for human usage.

| Ø mm | PFA10 - SDR 17 | | | PFA12,5 - SDR 13,6 | | | PFA16 - SDR 11 | | | | | PFA25 - SDR 7,4 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Thick.min mm | Code | mt | Thick.min mm | Code | Coil mt | Thick.min mm | Code | Coil mt | Code | Sticks mt | Thick.min mm | Code | Coil mt | Code | Sticks mt |
| 20 | 1,6 | TPE501 | 100 (Coil ) | 1,8 | TPE530● | 100 | 2,0 | TPE510 | 100 | | | 3,0 | TPE540 | 100 | | |
| 25 | 1,6 | TPE502 | | 2,0 | TPE531 | | 2,3 | TPE512 | | | | 3,5 | TPE541 | | | |
| 32 | 2,0 | TPE503 | | 2,4 | TPE532 | | 3,0 | TPE513 | 50-100 | TPE550 | 6 | 4,4 | TPE542 | 50-100 | TPE570 | 6 |
| 40 | 2,4 | TPE471 | | 3,0 | TPE533 | | 3,7 | TPE514 | | TPE551 | | 5,5 | TPE543 | | TPE571 | |
| 50 | 3,0 | TPE472 | | 3,7 | TPE534 | | 4,6 | TPE515 | | TPE552 | | 6,9 | TPE544 | | TPE572 | |
| 63 | 3,8 | TPE473 | | 4,7 | TPE535 | | 5,8 | TPE516 | | TPE553 | | 8,6 | TPE545 | | TPE573 | |
| 75 | 4,5 | TPE474 | | 5,6 | TPE536 | | 6,8 | TPE517 | | TPE554 | 6-12 | 10,3 | TPE546 | | TPE574 | |
| 90 | 5,4 | TPE475 | | 6,7 | TPE537 | | 8,2 | TPE518 | | TPE557 | | 12,3 | TPE547 | | TPE575 | 6-12 |
| 110 | 6,6 | TPE476 | 50 (Coil ) | 8,1 | TPE538 | 50 | 10,0 | TPE519 | 50 | TPE556 | | 15,1 | TPE548 | 50 | TPE576 | |
| 125 | 7,4 | TPE477 | 6-12 (Sticks) | | | | 11,4 | | | TPE520 | | 17,1 | | | TPE577 | |
| 140 | 8,3 | TPE478 | | | | | 12,7 | | | TPE521 | | 19,2 | | | TPE578 | |
| 160 | 9,5 | TPE479 | | | | | 14,6 | | | TPE522 | | 21,9 | | | TPE579 | |
| 180 | 10,7 | TPE480 | | | | | 16,4 | | | TPE567 | | 24,6 | | | TPE580 | 12 |
| 200 | 11,9 | TPE481 | | | | | 18,2 | | | TPE524 | | 27,4 | | | TPE581 | |
| 225 | 13,4 | TPE482 | | | | | 20,5 | | | TPE525 | | | | | | |
| 250 | 14,8 | TPE483 | | | | | 22,7 | | | TPE526 | | | | | | |
| 315 | 18,7 | TPE485 | | | | | 28,6 | | | TPE527 | | | | | | |
| 400 | 23,7 | TPE486 | 12 (Sticks) | | | | | | | | | | | | | |

● No estimated by UNI EN 12201 or EN 12201 - Other diameters until Ø 630 mm and pipe PFA6 SDR 26 (Ø mm da 160 a 630) on request

## ▶ LOW DENSITY POLYETHYLENE PIPE

According to with the **UNI 7990 del 2004** norm.

| Low density - PFA4 | | | |
|---|---|---|---|
| Code | Ø ext. mm | Th. mm | Coil mt |
| TPE020 | 16 | 1,4 | 500 |
| TPE021 | 20 | 1,6 | 200 |
| TPE043 | 25 | 1,7 | |
| TPE045 | 32 | 1,9 | |
| TPE046 | 40 | 2,4 | |
| TPE022 | 50 | 3,0 | 100 |
| TPE057 | 63 | 3,7 | |
| TPE041 | 75 | 4,5 | |
| TPE042 | 90 | 5,3 | |
| TPE080 | 110 | 6,5 | 50 |

| Low density - PFA6 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Code | Ø ext. mm | Th. mm | Coil mt | Code | Ø ext. mm | Th. mm | Coil mt |
| TPE101 | 16 | 1,6 | 100 | TPE049 | 20 | 1,7 | 100 |
| TPE103 | | | 300 | TPE054 | 25 | 2,2 | |
| | | | | TPE047 | 32 | 2,8 | |
| | | | | TPE053 | 40 | 3,5 | |
| | | | | TPE056 | 50 | 4,6 | |
| | | | | TPE063 | 63 | 5,4 | |
| | | | | TPE029 | 75 | 6,5 | |
| | | | | TPE082 | 90 | 7,8 | |
| | | | | TPE083 | 110 | 9,5 | 50 |

## ▶ POLYETHYLENE GAS PIPE

| Ø mm | MOP 3 - S 8,3 Code | Thick.min mm | Sticks mt | MOP 5 - S 5 Code | Thick.min mm | Coil mt | Code | Sticks mt |
|---|---|---|---|---|---|---|---|---|
| 20 | | | | TPG005• | 3,0 | 100 | | |
| 25 | | | | TPG006• | 3,0 | | | |
| 32 | | | | TPG002 | 3,0 | | TPG030 | 6 |
| 40 | | | | TPG003 | 3,7 | | TPG031 | |
| 50 | | | | TPG001 | 4,6 | 50-100 | TPG032 | |
| 63 | | | | TPG004 | 5,8 | | TPG033 | |
| 75 | | | | TPG007 | 6,8 | | TPG034 | |
| 90 | TPG107 | 5,2 | 6-12 | TPG008 | 8,2 | | TPG035 | 6-12 |
| 110 | TPG108 | 6,3 | | TPG009 | 10,0 | 50 | TPG036 | |
| 125 | TPG109 | 7,1 | | | 11,4 | | TPG037 | |
| 140 | TPG110 | 8,0 | | | 12,7 | | TPG038 | |
| 160 | TPG111 | 9,1 | | | 14,6 | | TPG039 | |
| 180 | TPG112 | 10,3 | | | 16,4 | | TPG040 | |
| 200 | TPG113 | 11,4 | | | 18,2 | | TPG041 | |

• on request - Other diameters until Ø 400 mm on request

Polyethylene pipes (PE) for conveying burner gas with a density not exceeding 0,8 according to the UNI ISO 4437 NORM plus revisions and changes prescribed by italian law.

## ▶ MINI COIL RAIN BIRD

| Code | Ø ext | Color | Mt |
|---|---|---|---|
| TPE110• | 16 | Black | 25 |
| TPE111• | | | 50 |
| TPE112 | | | 100 |
| TPE113 | | Brown | 25 |
| TPE114• | | | 50 |
| TPE115 | | | 100 |

• until stocks

## ▶ STIFF PVC PIPE

| PFA6 Code | Ø ext. mm | Th. mm |
|---|---|---|
| **C=2,5 - SDR 33** | | |
| TRE149• | 40 | 1,5 |
| TRE046•• | 50 | 1,6 |
| TRE022•• | 63 | 2,0 |
| TRE021 | 75 | 2,3 |
| TRE010 | 90 | 2,8 |
| **C=2,0 - SDR 41** | | |
| TRE045 | 110 | 2,7 |
| TRE011 | 125 | 3,1 |
| TRE150 | 140 | 3,5 |
| TRE151 | 160 | 4,0 |
| TRE152 | 180 | 4,4 |
| TRE153 | 200 | 4,9 |
| TRE154 | 225 | 5,5 |
| TRE155 | 250 | 6,2 |

| PFA10 Code | Ø ext. mm | Th. mm |
|---|---|---|
| **C=2,5 - SDR 21** | | |
| TRE001• | 32 | 1,6 |
| TRE002• | 40 | 1,9 |
| TRE003•• | 50 | 2,4 |
| TRE004•• | 63 | 3,0 |
| TRE005 | 75 | 3,6 |
| TRE006 | 90 | 4,3 |
| **C=2,5 - SDR 26** | | |
| TRE007 | 110 | 4,2 |
| TRE009 | 125 | 4,8 |
| TRE016 | 140 | 5,4 |
| TRE012 | 160 | 6,2 |
| TRE160 | 180 | 6,9 |
| TRE013 | 200 | 7,7 |
| TRE148 | 225 | 8,6 |
| TRE008 | 250 | 9,6 |

| PFA16 Code | Ø ext. mm | Th. mm |
|---|---|---|
| **C=2,5 - SDR 13,6** | | |
| TRE170• | 32 | 2,4 |
| TRE171• | 40 | 3,0 |
| TRE172 | 50 | 3,7 |
| TRE048 | 63 | 4,7 |
| TRE169 | 75 | 5,6 |
| TRE080 | 90 | 6,7 |
| **C=2,5 - SDR 17** | | |
| TRE050 | 110 | 6,6 |
| TRE020 | 125 | 7,4 |
| TRE173 | 140 | 8,3 |
| TRE174 | 160 | 9,5 |
| TRE175 | 180 | 10,7 |
| TRE176 | 200 | 11,9 |

• Only glueable cuff
•• Glueable cuff only on request

PVC pipe for pressurized fluid ducts. According to **UNI EN 1452** norm and corresponding to the prescriptions of decree n° 174 dated 06/04/04 (Official Gazzete n° 166 dated 17/07/04) of the Ministry of health.

# PIPES

## ▶ DOUBLE LAYER CORRUGATED PEAD PIPE

For protection and passage of water ducts, electrical cables, etc… Built in PEAD, externally corrugated and internally covered by a low density polyethylene layer that makes them smooth to ease the internal passage. Cable puller included inside.
Crushing resistance 450 Newton. In compliance with CEI EN 50086-2-4/A1 (CEI 23-46) NORM and the essential requirements of directive B.T. 73/23/CEE and further changes.

| Code | Ø ext. mm | Mt |
|---|---|---|
| TVR007 | 40 | Coil 50 |
| TVR008 | 50 | |
| TVR002 | 63 | |
| TVR009 | 75 | |
| TVR003 | 90 | |
| TVR050 | 110 | |
| TVR051 | 125 | |
| TVR053 | 160 | |
| TVR054 | 200 | 25 |
| TVR080 | 110 | Sticks 6 |
| TVR081 | 125 | |
| TVR082 | 160 | |
| TVR083 | 200 | |

## ▶ DRAINAGE PIPE

### DOUBLE LAYER PEAD PIPE

For drainage systems.

| Code | Ø ext. mm | Coil mt |
|---|---|---|
| TDR530 | 63 | 50 |
| TDR531 | 75 | |
| TDR532 | 90 | |
| TDR533 | 110 | |
| TDR534 | 125 | |
| TDR536 | 160 | |
| TDR537 | 200 | 25 |

### PVC PIPE

Built in stiff PVC, corrugated and flexible. Standard hole width is 1,3 mm and it's ideal to avoid blockages. The ring structure lead to a great crushing resistance (buryable, in normal conditions, to 5 mt. of depth)

| Code | Ø ext. mm | Coil mt |
|---|---|---|
| TDR002 | 50 | 240 |
| TDR003 | 65 | 170 |
| TDR005 | 80 | 100 |
| TDR006 | 100 | 50 |
| TDR007 | 125 | |
| TDR009 | 160 | |
| TDR008 | 200 | 40 |

### COVERED PVC PIPE

With a organic material siding that:
1) guarantees a great water flow capability which shows to be even three times better than the PVC pipe.
2) guarantees a durable filtering function avoiding holes and pipes blockage caused by subtle silt particles during the mud covering process and the consequent exsiccation.

| Code | Ø ext. mm | Coil mt |
|---|---|---|
| TDR011 | 50 | 200 |
| TDR012 | 65 | 150 |
| TDR013 | 80 | 100 |
| TDR014 | 100 | 50 |

## ▶ SUCTION PIPES

For aspirations and pours of water, food liquids and others. Built in a light and flexible PVC plastified harmless pipe, the coil layer is reinforced with a stiff shock absorbent and crushing resistant PVC.
Application temperatures: -15°/+60° C
Color: transparent with ivory coil.

| Code | Ø ext. mm | Coil Mt. |
|---|---|---|
| TSP010 | 20 | 50 |
| TSP001 | 25 | |
| TSP002 | 30 | |
| TSP009 | 32 | |
| TSP003 | 35 | |
| TSP004 | 40 | |
| TSP012 | 45 | |
| TSP005 | 50 | |
| TSP011 | 60 | |

# FITTINGS

## ► HANSEN THREADED FITTING IN GLASS FIBRE REINFORCED

# THREADED FITTING

**Specifications**:
**Certificates ISO 9001:2000**;
**WRAS** (certificate for using drinking water);
**Material**: PA (reinforced glass nylon).

| Allowable pressure | |
|---|---|
| Ø | PFA bar at 20° |
| ⅛" ÷ 2" | 16 |
| 2"½ | 12 |
| 3" ÷ 4" | 10 |

**LIST OF MAXIMUM RESISTANCE TO CHEMICALS**

| CHEMICAL SUBSTANCES | RESISTANCE LEVEL | | | | | |
|---|---|---|---|---|---|---|
| | THREADED FITTING | | | TANK FITTING | | |
| | GOOD | OK - BUT CHECK FURTHER | BAD - TRY TO AVOID | GOOD | OK - BUT CHECK FURTHER | BAD - TRY TO AVOID |
| Acids Weak | | | X | | | X |
| Acids Strong | | | X | | | X |
| Organic Acids Weak | | X | | | X | |
| Organic Acids Strong | | | X | | | X |
| Bases Weak | X | | | X | | |
| Bases Strong | | X | | | X | |
| Bleach | | | X | | | X |
| Automotive Fuel | X | | | | | X |
| Automotive Lubricants | X | | | | | X |
| Hydraulic Fluids | | X | | | | X |
| Solvents | | X | | | X | |
| Hydrocarbons | X | | | X | | |
| Halogens | | | X | | | X |
| Alcohols | | X | | | X | |
| Aldehydes | | | X | | | X |
| Amines | | | X | | | X |
| Esters | X | | | | | X |
| Ethers | X | | | | | X |
| Ketones | | X | | | | X |
| Detergents | X | | | X | | |
| Oxidizing Agents | | | X | | | X |
| Weak Hydrogen Peroxide | | X | | | X | |
| Phenols | | | X | | | X |

**This chart is intended as a basic guide only. The resistance to a given chemical will vary with temperature and concentrations.**

### TANK FEMALE THREADED FITTING

| Code | Ø | Pack | Box |
|---|---|---|---|
| RAT010 | ½" | 1 | 220 |
| RAT011 | ¾" | | 160 |
| RAT012 | 1" | | 110 |
| RAT013 | 1"¼ | | 70 |
| RAT014 | 1"½ | | 55 |
| RAT015 | 2" | | 40 |
| RAT016 | 3" | | 18 |
| RAT017 | 4" | | 10 |

### TANK HOSE ADAPTOR FITTING

| Code | Ø | Color | Pack | Box |
|---|---|---|---|---|
| RAT020 | 1"¼ | Black | 1 | 150 |
| RAT021 | 1"½ | | | 100 |
| RAT022 | 2" | | | 60 |
| RAT023 | 1"¼ | White | | 150 |
| RAT024 | 1"½ | | | 50 |
| RAT025 | 2" | | | 60 |

### FEMALE-FEMALE UNION

| Code | Ø | Pack | Box |
|---|---|---|---|
| SRBC001 | ½" | 1 | 270 |
| SRBC002 | ¾" | | 370 |
| SRBC003 | 1" | | 240 |
| SRBC004 | 1" x ¾" | | 240 |
| SRBC005 | 1"¼ | | 150 |
| SRBC006 | 1"¼ x 1 | | 155 |
| SRBC007 | 1"½ | | 100 |
| SRBC008 | 2" | | 70 |

## MALE-FEMALE REDUCER

| Code | Ø | Pack | Box |
|---|---|---|---|
| SRRD001 | ¾" x ½" | 10 | 1.400 |
| SRRD002 | 1" x ½" | | 500 |
| SRRD003 | 1" x ¾" | | 1.000 |
| SRRD004 | 1"¼ x ½" | | 600 |
| SRRD005 | 1"¼ x ¾" | | |
| SRRD006 | 1"¼ x 1" | | 700 |
| SRRD007 | 1"½ x ½" | | 500 |
| SRRD008 | 1"½ x ¾" | | |
| SRRD009 | 1"½ x 1" | | |
| SRRD010 | 1"½ x 1"¼ | | |
| SRRD011 | 2" x ½" | | 270 |
| SRRD012 | 2" x ¾" | | 280 |
| SRRD013 | 2" x 1" | | |
| SRRD014 | 2" x 1"¼ | | |
| SRRD015 | 2" x 1"½ | | |
| SRRD016 | 2"½ x 1"¼ | | 70 |
| SRRD017 | 2"½ x 1"½ | | 160 |
| SRRD018 | 2"½ x 2" | | 150 |
| SRRD019 | 3" x 1"½ | | 40 |
| SRRD020 | 3" x 2" | | 100 |
| SRRD021 | 3" x 2"½ | | 50 |
| SRRD022 | 4" x 2" | 1 | 30 |
| SRRD023 | 4" x 2"½ | | |
| SRRD024 | 4" x 3" | | 63 |

## FEMALE REDUCER THREADED SOCKET

| Code | Ø | Pack | Box |
|---|---|---|---|
| SRMR001 | ¾" x ½" | 10 | 400 |
| SRMR002 | 1" x ½" | | 270 |
| SRMR003 | 1" x ¾" | | 250 |
| SRMR004 | 1"¼ x ¾" | | 160 |
| SRMR005 | 1"¼ x 1" | | 150 |
| SRMR006 | 1"½ x ¾" | | |
| SRMR007 | 1"½ x 1" | | 120 |
| SRMR008 | 1"½ x 1"¼ | | 110 |
| SRMR009 | 2" x ¾" | | 90 |
| SRMR010 | 2" x 1" | | |
| SRMR011 | 2" x 1"¼ | | 70 |
| SRMR012 | 2" x 1"½ | | |
| SRMR013 | 2"½ x 1"½ | 1 | 110 |
| SRMR014 | 2"½ x 2" | | 40 |
| SRMR015 | 3" x 2" | | 60 |
| SRMR016 | 3" x 2"½ | | 25 |
| SRMR017 | 4" x 2"½ | | 36 |
| SRMR018 | 4" x 3" | | 24 |

## REDUCED NIPPLE

| Code | Ø | Pack | Box |
|---|---|---|---|
| SRNP100 | ¾" x ½" | 10 | 500 |
| SRNP101 | 1" x ½" | | 170 |
| SRNP102 | 1" x ¾" | | 700 |
| SRNP104 | 1"¼ x ¾" | | 80 |
| SRNP105 | 1"¼ x 1" | | 400 |
| SRNP107 | 1"½ x ¾" | | 120 |
| SRNP108 | 1"½ x 1" | | 310 |
| SRNP109 | 1"½ x 1"¼ | | 290 |
| SRNP111 | 2" x ¾" | | 180 |
| SRNP112 | 2" x 1" | | |
| SRNP113 | 2" x 1"¼ | | 160 |
| SRNP114 | 2" x 1"½ | | |
| SRNP115 | 2"½ x 1"¼ | | 100 |
| SRNP116 | 2"½ x 1"½ | | |
| SRNP117 | 2"½ x 2" | | 40 |
| SRNP118 | 3" x 1"½ | 1 | 70 |
| SRNP119 | 3" x 2" | | 96 |
| SRNP120 | 3" x 2"½ | | 64 |
| SRNP121 | 4" x 2" | | 36 |
| SRNP122 | 4" x 2"½ | | |
| SRNP123 | 4" x 3" | | 18 |

## NIPPLE

| Code | Ø | Pack | Box |
|---|---|---|---|
| SRNP050 | ½" | 10 | 800 |
| SRNP051 | ¾" | | 1.000 |
| SRNP052 | 1" | | 600 |
| SRNP053 | 1"¼ | | 360 |
| SRNP054 | 1"½ | | 260 |
| SRNP055 | 2" | | 140 |
| SRNP056 | 2"½ | 1 | 85 |
| SRNP057 | 3" | | 64 |
| SRNP058 | 4" | | 27 |

## 90° MALE/FEMALE THREADED ELBOW

| Code | Ø | Pack | Box |
|---|---|---|---|
| SRGO100 | ½" | 10 | 450 |
| SRGO101 | ¾" | | 600 |
| SRGO102 | 1" | | 320 |
| SRGO103 | 1"¼ | | 200 |
| SRGO104 | 1"½ | | 130 |
| SRGO105 | 2" | | 70 |

## FEMALE THREADED SOCKET

| Code | Ø | Pack | Box |
|---|---|---|---|
| SRMF050 | ½" | 10 | 950 |
| SRMF051 | ¾" | | 700 |
| SRMF052 | 1" | | 450 |
| SRMF053 | 1"¼ | | 280 |
| SRMF054 | 1"½ | | 200 |
| SRMF055 | 2" | | 120 |
| SRMF056 | 2"½ | 1 | 80 |
| SRMF057 | 3" | | 45 |
| SRMF058 | 4" | | 24 |

## 90° FEMALE THREADED ELBOW

| Code | Ø | Pack | Box |
|---|---|---|---|
| SRGO050 | ½" | 10 | 400 |
| SRGO051 | ¾" | | 550 |
| SRGO052 | 1" | | 320 |
| SRGO053 | 1"¼ | | 190 |
| SRGO054 | 1"½ | | 130 |
| SRGO055 | 2" | | 70 |
| SRGO056 | 2"½ | 1 | 40 |
| SRGO057 | 3" | | 10 |
| SRGO058 | 4" | | 11 |

## SELF-THREADING BACKNUT REDUCING FROM FEMALE TO HOSE ADAPTOR

| Code | Ø | Pack | Box |
|---|---|---|---|
| SRPG011 | ¾"F x ½"H.A. | 1 | 340 |
| SRPG012 | 1"F x ¾"H.A. | | 200 |
| SRPG013 | 1"¼"F x 1"H.A. | | 110 |
| SRPG014 | 1"½F x 1"¼H.A. | | 60 |
| SRPG015 | 2"F x 1"½H.A. | | 40 |

## SELF-THREADING BACKNUT FITTING FROM F TO H.A.

| Code | Ø | Pack | Box |
|---|---|---|---|
| SRPG010 | ½"F x ½"H.A. | 1 | 850 |

## MALE-FEMALE REDUCER

| Code | Ø | Pack | Box |
|---|---|---|---|
| SRMG001 | ½"M x ¾"F | 10 | 240 |

# FITTINGS

**MALE THREADED PLUG**

| Code | Ø | Pack | Box |
|---|---|---|---|
| SRTA001 | ½" | 10 | 550 |
| SRTA002 | ¾" | | 700 |
| SRTA003 | 1" | | 500 |
| SRTA004 | 1"¼ | | 280 |
| SRTA005 | 1"½ | | 400 |
| SRTA006 | 2" | | 260 |
| SRTA007 | 2"½ | | 60 |
| SRTA008 | 3" | | 90 |
| SRTA009 | 4" | 1 | 27 |

**FEMALE THREADED CAP**

| Code | Ø | Pack | Box |
|---|---|---|---|
| SRTA100 | ½" | 10 | 900 |
| SRTA101 | ¾" | | 700 |
| SRTA102 | 1" | | 450 |
| SRTA103 | 1"¼ | | 230 |
| SRTA104 | 1"½ | | 320 |
| SRTA105 | 2" | | 220 |
| SRTA106 | 2"½ | | 60 |
| SRTA107 | 3" | | 70 |
| SRTA108 | 4" | 1 | 24 |

**DIE AND WINGS FITTING FROM F TO H.A.**

| Code | Ø | Pack | Box |
|---|---|---|---|
| SRPG001 | ½"F x ½"H.A. | 1 | 10 |
| SRPG002 | ¾"F x ½"H.A. | | 200 |
| SRPG003 | ¾"F x ¾"H.A. | | 350 |
| SRPG004 | 1"F x ½"H.A. | | 150 |
| SR4005 | 1"F x ¾"H.A. | | 250 |

**DIE**

| Code | Ø | Pack | Box |
|---|---|---|---|
| SRDD001 | ½" | 10 | 10 |
| SRDD002 | ¾" | | |
| SRDD003 | 1" | | |
| SRDD004 | 1"¼ | | |

**LARGE DIE**

| Code | Ø | Pack | Box |
|---|---|---|---|
| SRDD005 | ½" | 10 | 10 |

**90° FEMALE THREADED TEE**

| Code | Ø | Pack | Box |
|---|---|---|---|
| SRTE001 | ½" | 10 | 250 |
| SRTE002 | ¾" | | 360 |
| SRTE003 | 1" | | 200 |
| SRTE004 | 1"¼ | | 110 |
| SRTE005 | 1"½ | | 80 |
| SRTE006 | 2" | | 45 |
| SRTE007 | 2"½ | 1 | 15 |
| SRTE008 | 3" | | 19 |
| SRTE009 | 4" | | 9 |

**9° MALE/FEMALE KMUCKLE UNION**

| Code | Ø | Pack | Box |
|---|---|---|---|
| SRBC010 | ¾" | 5 | 5 |
| SRBC011 | 1" | | |
| SRBC012 | 1"¼ | | |

## ► HANSEN VALVES

**F/F VALVE**

| Code | Ø | Pack | Box |
|---|---|---|---|
| OHV001 | ½" | 1 | 51 |
| OHV002 | ¾" | | 51 |
| OHV003 | 1" | | 32 |
| OHV004 | 1"¼ | | 24 |
| OHV005 | 1"½ | | 17 |
| OHV006 | 2" | | 10 |

**Max. tolerable pressure**: 16 bar.

**UV resistant materials**:
**body and handle:** fiberglass reinforced nylon;
**ball**: PP;
**seat**: acetalic resin (POM);
**int. gaskets**: nitrile rubber.

**F/F CHECK VALVE**

| Code | Ø | Pack | Box |
|---|---|---|---|
| OHV010 | 1" | 1 | 80 |
| OHV011 | 1"¼ | | 45 |
| OHV012 | 1"½ | | 35 |
| OHV013 | 2" | | 18 |
| OHV014 | 2"½ | | 8 |

**Max. tolerable pressure**: 16 bar.
**Minimum opening pressure**: 0,035 bar.

**UV resistant materials**:
**body**: fiberglass reinforced nylon;
**spring**: s/s;
**diaphragm**: nitrile rubber.

**FEMALE FOOT VALVE**

| Code | Ø | Pack | Box |
|---|---|---|---|
| OHV015 | 1" | 1 | 160 |
| OHV016 | 1"¼ | | 90 |
| OHV017 | 1"½ | | 70 |
| OHV018 | 2" | | 36 |
| OHV019 | 2"½ | | 8 |

**Max. tolerable pressure**: 16 bar.

**UV resistant materials**:
**body**: fiberglass reinforced nylon;
**spring**: s/s;
**diaphragm**: nitrile rubber.

**DIMENSIONS**

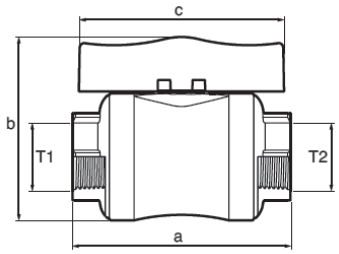
| t1 t2 Ø | a mm | b mm | c mm | d mm | e mm |
|---|---|---|---|---|---|
| ½” | 98 | 82 | 93 | 56 | 54 |
| ¾” | 98 | 82 | 93 | 56 | 54 |
| 1” | 111 | 93 | 104 | 65 | 61 |
| 1”¼ | 122 | 107 | 112 | 76 | 69 |
| 1”½ | 135 | 124 | 123 | 90 | 79 |
| 2” | 146 | 140 | 131 | 106 | 89 |

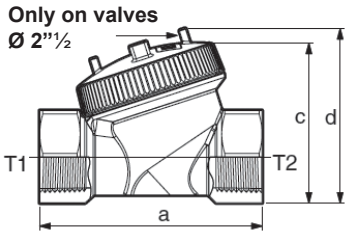
**DIMENSIONS**

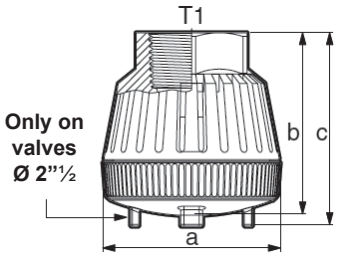
| t1 t2 Ø | a mm | b mm | c mm | d mm |
|---|---|---|---|---|
| 1” | 102 | 69 | 72 | Na |
| 1”¼ | 122 | 87 | 92 | Na |
| 1”½ | 132 | 99 | 104 | Na |
| 2” | 164 | 123 | 132 | Na |
| 2”½ | 198 | 152 | Na | 178 |

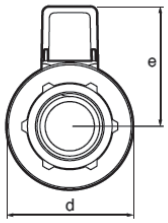
**DIMENSIONS**

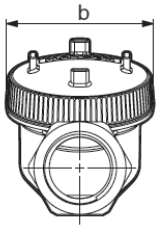
| Ø | a mm | b mm | c mm |
|---|---|---|---|
| 1” | 69 | 72 | Na |
| 1”¼ | 87 | 88 | Na |
| 1”½ | 99 | 99 | Na |
| 2” | 123 | 120 | Na |
| 2”½ | 152 | Na | 156 |




| LIST OF MAXIMUM RESISTANCE TO CHEMICALS | | | | | | |
|---|---|---|---|---|---|---|
| | RESISTANCE LEVEL | | | | | |
| | THREADED FITTING | | | TANK FITTING | | |
| CHEMICAL SUBSTANCES | GOOD | OK - BUT CHECK FURTHER | BAD - TRY TO AVOID | GOOD | OK - BUT CHECK FURTHER | BAD - TRY TO AVOID |
| Acids Weak | | | X | | | X |
| Acids Strong | | | X | | | X |
| Organic Acids Weak | | X | | | X | |
| Organic Acids Strong | | | X | | | X |
| Bases Weak | X | | | X | | |
| Bases Strong | | | X | | X | |
| Bleach | | | X | | | X |
| Automotive Fuel | | | X | X | | |
| Automotive Lubricants | | | X | X | | |
| Hydraulic Fluids | | | X | | | X |
| Solvents | | | X | | X | |
| Hydrocarbons | | | X | X | | |
| Halogens | | | X | | | X |
| Alcohols | | | X | | | X |
| Aldehydes | | | X | | | X |
| Amines | | | X | | | X |
| Esters | | | X | | | X |
| Ethers | | | X | | | X |
| Ketones | | | X | | | X |
| Detergents | X | | | X | | |
| Oxidizing Agents | | | X | | | X |
| Weak Hydrogen Peroxide | | | X | | X | |
| Phenols | | | X | | | X |

**This chart is intended as a basic guide only. The resistance to a given chemical will vary with temperature and concentrations.**

## ▶ HANSEN REGULATORS LEVEL

HANSEN™

### SUPER FLO

| Code | Ø | Pack | Box |
|---|---|---|---|
| SGL001 | ¾"-1" | 1 | 20 |
| SGL008 | ¾"-1" - LONG | | |
| SGL007 | ½"-¾" | | |
| SGL006 | ¾"-1" | | 1 |
| SGL010 | ½"-¾" LONG | | |
| SGL009 | ½"-¾" | | |
| All level controls are accompanied by male threaded adapters | | | |

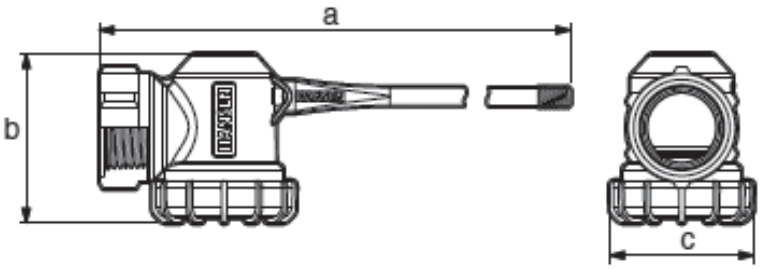
| Code | Descr. | Color | Pack | Box |
|---|---|---|---|---|
| SGL002 | Sphere Ø 140mm threaded for auction | Blue | 1 | 18 |
| SGL013 | | Yellow | | |

- Working Pressure: 0.2 to 12 bar;
- flow rate: 188 l/m at 2 bar - 455 l/m at 12 bar;
- UV-resistant materials:
- body and plunger: acetal resin;
- nut: reinforced nylon fiber;
- pin: stainless steel;
- seal: Thermoplastic Elastomer polyurethane;
- Cable: polyester;
- float: HDPE;
- Thread the float: reinforced nylon fiber glass;
- adapter: glass-fiber reinforced nylon

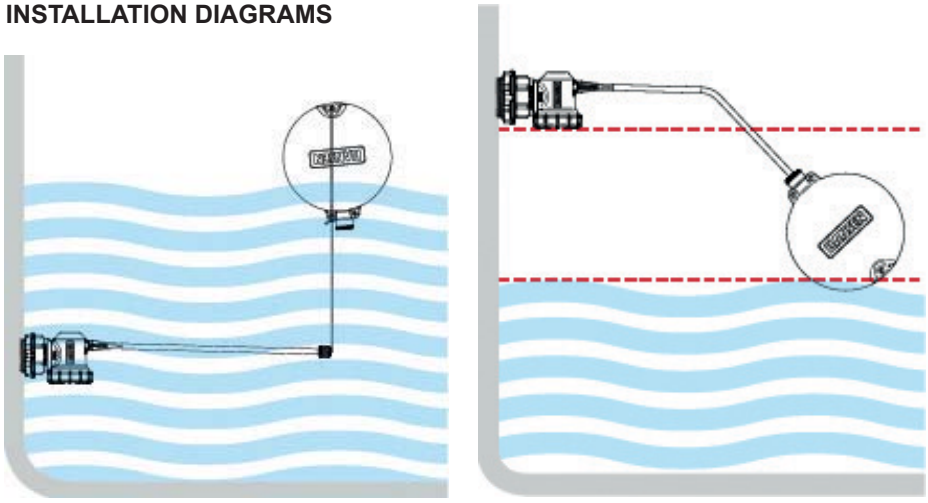
| LIST OF MAXIMUM RESISTANCE TO CHEMICALS | | | |
|---|---|---|---|
| | RESISTANCE LEVEL | | |
| CHEMICAL SUBSTANCES | GOOD | OK - BUT CHECK FURTHER | BAD - TRY TO AVOID |
| Acids Weak | | | X |
| Acids Strong | | | X |
| Organic Acids Weak | | X | |
| Organic Acids Strong | | | X |
| Bases Weak | X | | |
| Bases Strong | | | X |
| Bleach | | | X |
| Automotive Fuel | | | X |
| Automotive Lubricants | | | X |
| Hydraulic Fluids | | | X |
| Solvents | | | X |
| Hydrocarbons | | | X |
| Halogens | | | X |
| Alcohols | | | X |
| Aldehydes | | | X |
| Amines | | | X |
| Esters | | | X |
| Ethers | | | X |
| Ketones | | | X |
| Detergents | X | | |
| Oxidizing Agents | | | X |
| Weak Hydrogen Peroxide | | | X |
| Phenols | | | X |
| **This chart is intended as a basic guide only. The resistance to a given chemical will vary with temperature and concentrations.** | | | |

### DIMENSIONS

| a mm | b mm | c mm |
|---|---|---|
| 376 | 69 | 58 |




### INSTALLATION DIAGRAMS



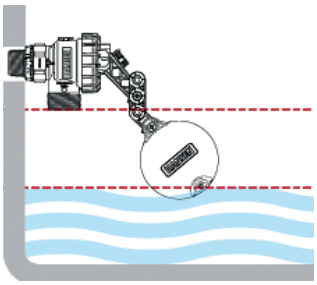
## MAX FLO

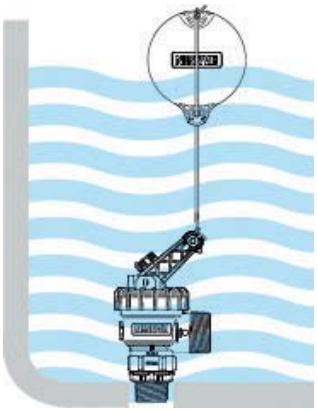
| Code | Ø | Pack | Box |
|---|---|---|---|
| SGL003 | ¾"-1" | 1 | 1 |
| SGL011 | ¾"-1" LONG | | |
| SGL012 | 1"¼ - 1" LONG | | |
| All level controls are accompanied by pmale threaded adapters | | | |

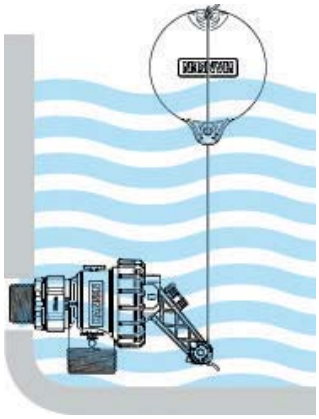
- Working Pressure: 0.2 to 12 bar;
- Flow rate: 570 l/m AT 2 bar - 1.275 l/m AT 12 bar.

UV-resistant materials: diaphragm body, arm and nut: Glass-fiber reinforced nylon ● diaphragm: Nitrile rubber ● diaphragm spring and pin: stainless steel ● cable: polyester ● float: HDPE ● thread the float: reinforced nylonfiber glass ● adapter: glass-fiber reinforced nylon

### INSTALLATION DIAGRAMS

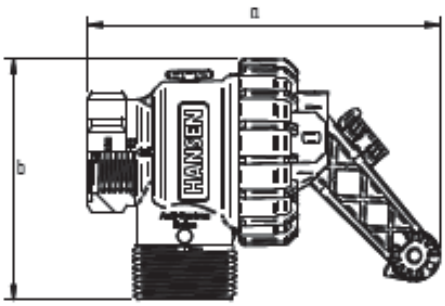






### DIMENSIONS

| a mm | b mm | c mm |
|---|---|---|
| 144 | 98 | 76 |



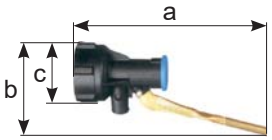
## FAST FLO

NEW

Fast-Flo valve was designed as a compact valve for use in small troughs and header tanks or any situation where the valve space is confined.

### FEATURES & BENEFITS

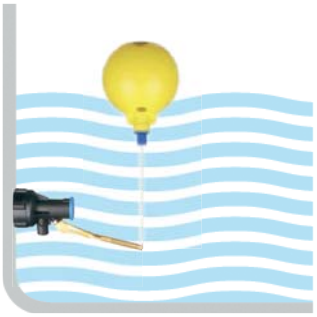
**Working Pressure**: 0,2÷12 bar.
**High performance**: 34 l/m at 2 bar - 56 l/m at 5 bar.
Ability to attach a diffuser hose to reduce water turbulence and noise.
Manufactured from strong non corrosive UV stabilised materials.

| Code | Body female Ø | Adapter male-male Ø | Dimension mm a | b | c |
|---|---|---|---|---|---|
| | | | |   | |
| Short Arm Valves | | | | | |
| SGL050 | 1" | 1" x ½" | 166 | 75 | 44 |
| SGL051 | | 1" x ¾" | | | |
| SGL052 | | 1" x 1" | | | |
| Long Arm Valves | | | | | |
| SGL053 | 1" | 1" x ½" | 266 | 75 | 44 |
| SGL054 | | 1" x ¾" | | | |
| SGL055 | | 1" x 1" | | | |

# FITTINGS

| Code | Descr. | Color | Pack | Box |
|---|---|---|---|---|
| SGL002 | Sphere Ø 115mm threaded for auction | Blue | 1 | 18 |
| SGL013 | | Yellow | | |

## INSTALLATION DIAGRAMS



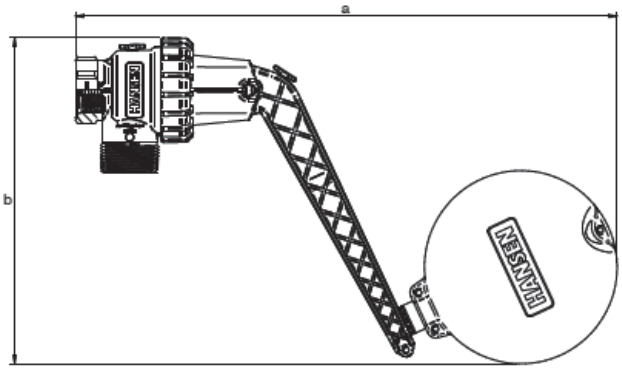
## LEVELLER

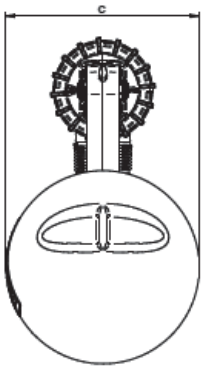
| Code | Ø | Pack | Box |
|---|---|---|---|
| SGL004 | Threaded F 1” | 1 | 1 |
| All level controls are accompanied by pmale threaded adapters | | | |

- Working Pressure: 0.2 to 12 bar;
- flow rate: 570 l/m AT 2 bar - 1.275 l/m AT 12 bar.

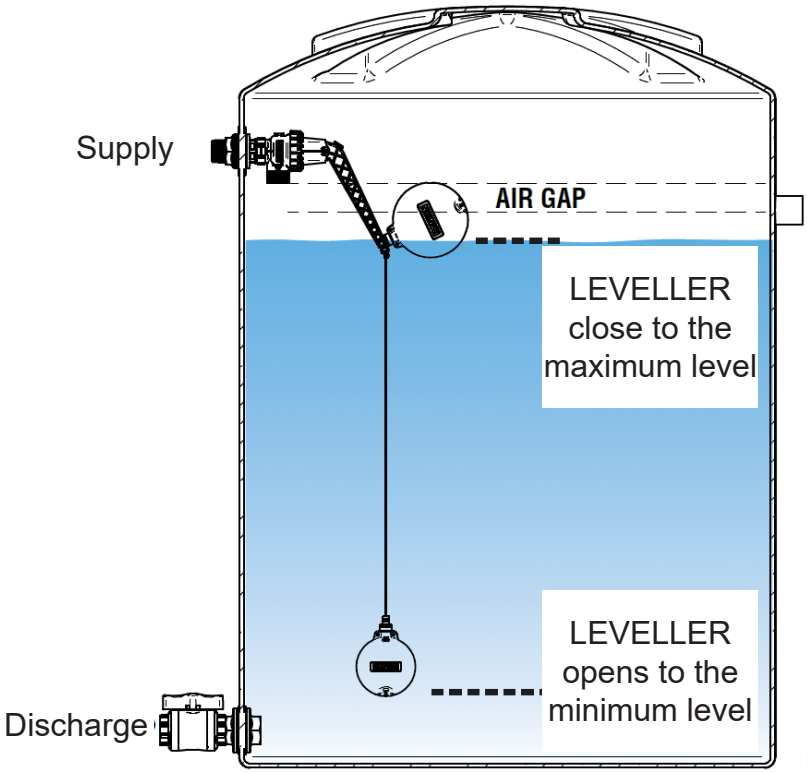
UV-resistant materials: diaphragm body, arm and nut: Glass-fiber reinforced nylon • diaphragm: Nitrile rubber • diaphragm spring and pin: Stainlesssteel • cable: polyester • float: HDPE • thread the float: reinforced nylonfiber glass • adapter: glass-fiber reinforced nylon

## DIMENSIONS




| a mm | b mm | c mm |
|---|---|---|
| 395 | 237 | 140 |




INSTALLATION DIAGRAM

## ► COMPRESSION FITTINGS FOR PE PIPES

# COMPRESSION FITTINGS BLUE SERIES PFA16

- Materials Polypropylene
- Due to conical tightening, they remove faults in pipes that may be caused by dimentional differences and ovality up to ± 0,5 mm.
- They prevent alga and bacteria forming due to UVproof (ultraviolet beam) structure.
- O-rings are made of natural rubber and provide high leakproofness.
- It has a homogeneous and poreless inner surface.
- It does not change the taste ot the smell of the water.

### MALE THREADED ADAPTOR

| Code | Ø | PFA | Pack. |
|---|---|---|---|
| RGMI100 | 20 x ½" | 16 | 50 |
| RGMI101 | 20 x ¾" | | |
| RGMI103 | 25 x ½" | | 25 |
| RGMI104 | 25 x ¾" | | |
| RGMI105 | 25 x 1" | | |
| RGMI114 | 32 x ½" | | |
| RGMI106 | 32 x ¾" | | |
| RGMI107 | 32 x 1" | | |
| RGMI108 | 32 x 1"¼ | | |
| RGMI110 | 40 x 1" | | 15 |
| RGMI111 | 40 x 1"¼ | | |
| RGMI112 | 40 x 1"½ | | |
| RGMI113 | 50 x 1"¼ | | 10 |
| RGMI115 | 50 x 1"½ | | |
| RGMI130 | 50 x 2" | | |
| RGMI116 | 63 x 1"½ | | 6 |
| RGMI117 | 63 x 2" | | |
| RGMI118 | 63 x 2"½ | | |
| RGMI119 | 75 x 2" | 10 | 4 |
| RGMI120 | 75 x 2"½ | | |
| RGMI121 | 75 x 3" | | |
| RGMI122 | 90 x 2" | | |
| RGMI123 | 90 x 2"½ | | |
| RGMI124 | 90 x 3" | | |
| RGMI125 | 90 x 4" | | |
| RGMI126 | 110 x 2" | | 2 |
| RGMI127 | 110 x 2"½ | | |
| RGMI128 | 110 x 3" | | |
| RGMI129 | 110 x 4" | | |

### FEMALE THREADED ADAPTOR

| Code | Ø | PFA | Pack. |
|---|---|---|---|
| RGFI100 | 20 x ½" | 16 | 50 |
| RGFI101 | 20 x ¾" | | |
| RGFI102 | 25 x ½" | | 25 |
| RGFI104 | 25 x ¾" | | |
| RGFI105 | 25 x 1" | | |
| RGFI106 | 32 x ¾" | | |
| RGFI107 | 32 x 1" | | |
| RGFI108 | 32 x 1"¼ | | |
| RGFI109 | 40 x 1" | | 15 |
| RGFI110 | 40 x 1"¼ | | |
| RGFI111 | 40 x 1"½ | | |
| RGFI112 | 50 x 1"¼ | | 10 |
| RGFI113 | 50 x 1"½ | | |
| RGFI114 | 50 x 2" | | |
| RGFI115 | 63 x 1"½ | | 6 |
| RGFI116 | 63 x 2" | | |
| RGFI117 | 63 x 2"½ | | |
| RGFI118 | 75 x 2" | 10 | 4 |
| RGFI119 | 75 x 2"½ | | |
| RGFI120 | 75 x 3" | | |
| RGFI121 | 90 x 2" | | |
| RGFI122 | 90 x 2"½ | | |
| RGFI123 | 90 x 3" | | |
| RGFI124 | 90 x 4" | | |
| RGFI125 | 110 x 2" | | 2 |
| RGFI126 | 110 x 2"½ | | |
| RGFI127 | 110 x 3" | | |
| RGFI128 | 110 x 4" | | |

### COUPLING

| Code | Ø | PFA | Pack. |
|---|---|---|---|
| RBGI001 | 20 x 20 | 16 | 25 |
| RBGI002 | 25 x 25 | | |
| RBGI003 | 32 x 32 | | 10 |
| RBGI004 | 40 x 40 | | |
| RBGI005 | 50 x 50 | | 6 |
| RBGI006 | 63 x 63 | | 5 |
| RBGI007 | 75 x 75 | 10 | 2 |
| RBGI008 | 90 x 90 | | |
| RBGI009 | 110 x 110 | | 1 |

### REDUCER COUPLING

| Code | Ø | PFA | Pack. |
|---|---|---|---|
| RMRI008 | 25 x 20 | 16 | 25 |
| RMRI009 | 32 x 20 | | 10 |
| RMRI010 | 32 x 25 | | |
| RMRI011 | 40 x 20 | | |
| RMRI025 | 40 x 25 | | |
| RMRI012 | 40 x 32 | | |
| RMRI013 | 50 x 25 | | 6 |
| RMRI026 | 50 x 32 | | |
| RMRI014 | 50 x 40 | | |
| RMRI015 | 63 x 25 | | |
| RMRI016 | 63 x 32 | | |
| RMRI027 | 63 x 40 | | |
| RMRI017 | 63 x 50 | | |
| RMRI018 | 75 x 50 | 10 | 2 |
| RMRI019 | 75 x 63 | | |
| RMRI020 | 90 x 63 | | |
| RMRI021 | 90 x 75 | | |
| RMRI022 | 110 x 63 | | 1 |
| RMRI023 | 110 x 75 | | |
| RMRI024 | 110 x 90 | | |

### T - 90°

| Code | Ø | PFA | Pack. |
|---|---|---|---|
| RTII100 | 20 x 20 x 20 | 16 | 15 |
| RTII101 | 25 x 25 x 25 | | 10 |
| RTII102 | 32 x 32 x 32 | | 5 |
| RTII103 | 40 x 40 x 40 | | |
| RTII104 | 50 x 50 x 50 | | 4 |
| RTII105 | 63 x 63 x 63 | | 3 |
| RTII106 | 75 x 75 x 75 | 10 | 1 |
| RTII107 | 90 x 90 x 90 | | |
| RTII108 | 110 x110 x 110 | | |

### LINE ENDING

| Code | Ø | PFA | Pack. |
|---|---|---|---|
| RTTI001 | 20 | 16 | 50 |
| RTTI002 | 25 | | 25 |
| RTTI003 | 32 | | |
| RTTI004 | 40 | | 15 |
| RTTI005 | 50 | | 12 |
| RTTI006 | 63 | | 6 |
| RTTI007 | 75 | 10 | 4 |
| RTTI008 | 90 | | |
| RTTI009 | 110 | | 2 |

### KEY

| Code | Ø | Pack. |
|---|---|---|
| RVRI001 | 32 - 63 | 5 |
| RVRI002 | 63 - 110 | |

# FITTINGS

## ELBOW 90°

| Code | Ø | PFA | Pack. |
|---|---|---|---|
| RGOI001 | 20 x 20 | 16 | 25 |
| RGOI002 | 25 x 25 | | 15 |
| RGOI003 | 32 x 32 | | 10 |
| RGOI004 | 40 x 40 | | 5 |
| RGOI005 | 50 x 50 | | 4 |
| RGOI006 | 63 x 63 | | |
| RGOI007 | 75 x 75 | 10 | 2 |
| RGOI008 | 90 x 90 | | 1 |
| RGOI009 | 110 x 110 | | |

## ELBOW 90° female threaded

| Code | Ø | PFA | Pack. |
|---|---|---|---|
| RGOI100 | 20 x½" | 16 | 25 |
| RGOI101 | 20 x¾" | | |
| RGOI102 | 25 x ½" | | 15 |
| RGOI103 | 25 x ¾" | | |
| RGOI104 | 25 x 1" | | |
| RGOI106 | 32 x ¾" | | 10 |
| RGOI107 | 32 x 1" | | |
| RGOI108 | 32 x 1"¼ | | |
| RGOI109 | 40 x 1" | | 5 |
| RGOI110 | 40 x 1"¼ | | |
| RGOI111 | 40 x 1"½ | | |
| RGOI112 | 50 x 1"¼ | | 4 |
| RGOI113 | 50 x 1"½ | | |
| RGOI099 | 50 x 2" | | |
| RGOI114 | 63 x 1"½ | | |
| RGOI115 | 63 x 2" | | |
| RGOI116 | 63 x 2"½ | | |
| RGOI117 | 75 x 2" | 10 | 2 |
| RGOI118 | 75 x 2"½ | | |
| RGOI150 | 75 x 3" | | 1 |
| RGOI120 | 90 x 2"½ | | |
| RGOI121 | 90 x 3" | | |
| RGOI122 | 90 x 4" | | |
| RGOI123 | 110 x 3" | | |
| RGOI124 | 110 x 4" | | |

## ELBOW 90° male threaded

| Code | Ø | PFA | Pack. |
|---|---|---|---|
| RGOI119 | 20 x ½" | 16 | 25 |
| RGOI145 | 20 x ¾" | | |
| RGOI146 | 25 x ½" | | 15 |
| RGOI125 | 25 x ¾" | | |
| RGOI126 | 25 x 1" | | |
| RGOI128 | 32 x ¾" | | 10 |
| RGOI129 | 32 x 1" | | |
| RGOI147 | 32 x 1"¼ | | |
| RGOI130 | 40 x 1" | | 5 |
| RGOI131 | 40 x 1"¼ | | |
| RGOI148 | 40 x 1"½ | | |
| RGOI149 | 50 x 1"¼ | | 4 |
| RGOI132 | 50 x 1"½ | | |
| RGOI133 | 50 x 2" | | |
| RGOI134 | 63 x 1"½ | | |
| RGOI135 | 63 x 2" | | |
| RGOI136 | 63 x 2"½ | | |
| RGOI137 | 75 x 2" | 10 | 2 |
| RGOI138 | 75 x 2"½ | | |
| RGOI139 | 75 x 3" | | 1 |
| RGOI140 | 90 x 2"½ | | |
| RGOI141 | 90 x 3" | | |
| RGOI142 | 90 x 4" | | |
| RGOI143 | 110 x 3" | | |
| RGOI144 | 110 x 4" | | |

## TEE FEMALE THREADED

| Code | Ø | PFA | Pack. |
|---|---|---|---|
| RTFI100 | 20 x ½" x 20 | 16 | 15 |
| RTFI101 | 20 x ¾" x 20 | | |
| RTFI102 | 25 x ½" x 25 | | 10 |
| RTFI103 | 25 x ¾" x 25 | | |
| RTFI104 | 25 x 1" x 25 | | |
| RTFI105 | 32 x ½" x 32 | | |
| RTFI106 | 32 x ¾" x 32 | | |
| RTFI107 | 32 x 1" x 32 | | |
| RTFI125 | 32 x 1"¼ x 32 | | 5 |
| RTFI126 | 40 x ¾" x 40 | | |
| RTFI108 | 40 x 1" x 40 | | |
| RTFI109 | 40 x 1"¼ x 40 | | |
| RTFI110 | 40 x 1"½ x 40 | | |
| RTFI111 | 50 x ¾" x 50 | | 4 |
| RTFI112 | 50 x 1" x 50 | | |
| RTFI127 | 50 x 1"¼ x 50 | | |
| RTFI128 | 50 x 1"½ x 50 | | |
| RTFI129 | 50 x 2" x 50 | | |
| RTFI130 | 63 x 1" x 63 | | 3 |
| RTFI131 | 63 x 1"¼ x 63 | | |
| RTFI113 | 63 x 1"½ x 63 | | |
| RTFI114 | 63 x 2" x 63 | | |
| RTFI115 | 63 x 2"½ x 63 | | |
| RTFI116 | 75 x 2" x 75 | 10 | 1 |
| RTFI117 | 75 x 2"½ x 75 | | |
| RTFI118 | 75 x 3" x 75 | | |
| RTFI119 | 90 x 2"½ x 90 | | |
| RTFI120 | 90 x 3" x 90 | | |
| RTFI121 | 90 x 4" x 90 | | |
| RTFI122 | 110 x 2"½ x 110 | | |
| RTFI123 | 110 x 3" x 110 | | |
| RTFI124 | 110 x 4" x 110 | | |

## TEE MALE THREADED

| Code | Ø | PFA | Pack. |
|---|---|---|---|
| RTMI100 | 20 x ½" x 20 | 16 | 15 |
| RTMI101 | 20 x ¾" x 20 | | |
| RTMI102 | 25 x ½" x 25 | | 10 |
| RTMI103 | 25 x ¾" x 25 | | |
| RTMI104 | 25 x 1" x 25 | | |
| RTMI105 | 25 x 1"¼ x 25 | | |
| RTMI106 | 32 x ¾" x 32 | | |
| RTMI107 | 32 x 1" x 32 | | |
| RTMI108 | 32 x 1"¼ x 32 | | 5 |
| RTMI109 | 40 x 1" x 40 | | |
| RTMI110 | 40 x 1"¼ x 40 | | |
| RTMI111 | 40 x 1"½ x 40 | | |
| RTMI112 | 50 x 1" x 50 | | 4 |
| RTMI113 | 50 x 1"¼ x 50 | | |
| RTMI114 | 50 x 1"½ x 50 | | |
| RTMI115 | 50 x 2" x 50 | | |
| RTMI116 | 63 x 1"¼ x 63 | | 3 |
| RTMI117 | 63 x 1"½ x 63 | | |
| RTMI118 | 63 x 2" x 63 | | |
| RTMI119 | 63 x 2"½ x 63 | | |
| RTMI120 | 75 x 2" x 75 | 10 | 1 |
| RTMI121 | 75 x 2"½ x 75 | | |
| RTMI122 | 75 x 3" x 75 | | |
| RTMI123 | 90 x 2"½ x 90 | | |
| RTMI124 | 90 x 3" x 90 | | |
| RTMI125 | 90 x 4" x 90 | | |
| RTMI126 | 110 x 2"½ x 110 | | |
| RTMI127 | 110 x 3" x 110 | | |
| RTMI128 | 110 x 4" x 110 | | |

## REDUCER T - 90°

| Code | Ø | PFA | Pack. |
|---|---|---|---|
| RTRI020 | 20 x 25 x 20 | 16 | 10 |
| RTRI021 | 25 x 20 x 25 | | |
| RTRI022 | 25 x 32 x 25 | | |
| RTRI002 | 32 x 20 x 32 | | 5 |
| RTRI003 | 32 x 25 x 32 | | |
| RTRI004 | 40 x 25 x 40 | | |
| RTRI005 | 40 x 32 x 40 | | |
| RTRI006 | 50 x 25 x 50 | | 4 |
| RTRI007 | 50 x 32 x 50 | | |
| RTRI008 | 50 x 40 x 50 | | |
| RTRI009 | 63 x 25 x 63 | | 3 |
| RTRI010 | 63 x 32 x 63 | | |
| RTRI011 | 63 x 40 x 63 | | |
| RTRI012 | 63 x 50 x 63 | | |
| RTRI013 | 75 x 50 x 75 | 10 | 1 |
| RTRI014 | 75 x 63 x 75 | | |
| RTRI015 | 90 x 63 x 90 | | |
| RTRI016 | 90 x 75 x 90 | | |
| RTRI017 | 110 x 63 x 110 | | |
| RTRI018 | 110 x 75 x 110 | | |
| RTRI019 | 110 x 90 x 110 | | |

# COMPRESSION FITTINGS BLACK AND GREY SERIES PFA10

**TECHNICAL DATA:**

**UNI 9561**
Made of Hi Grade Polypropylene.
Reinforcement inox ring SAE 304.
**Allowed pressure:** shown in the chart with water Temperature of 20° C

| C° exercise | 0° ÷ 25° | 25° ÷ 30° | 30° ÷ 35° | 35° ÷ 40° | 40° ÷ 45° |
|---|---|---|---|---|---|
| PFA* bar | 16,0 | 14,4 | 12,8 | 11,2 | 10,0 |
| | 10,0 | 9,0 | 8,0 | 7,0 | 6,3 |
| | 6,0 | 5,4 | 4,8 | 4,2 | 3,6 |

* According to EN805.

## MALE THREADED ADAPTOR

| Code | Ø mm | PFA | Pack |
|---|---|---|---|
| RGMA031 | 16 x ½” | 10 | 10 |
| RGMA032 | 16 x ¾” | | |
| RGMA033 | 20 x ½” | | |
| RGMA034 | 20 x ¾” | | |
| RGMA035 | 25 x ½” | | |
| RGMA036 | 25 x ¾” | | |
| RGMA037 | 25 x 1” | | |
| RGMA038 | 32 x ¾” | | |
| RGMA039 | 32 x 1” | | |
| RGMA040 | 32 x 1”¼ | | |
| RGMA041 | 40 x 1” | | 1 |
| RGMA042 | 40 x 1”¼ | | |
| RGMA043 | 40 x 1”½ | | |
| RGMA044 | 50 x 1”½ | | |
| RGMA045 | 50 x 2” | | |
| RGMA046 | 63 x 2” | | |
| RGMA047 | 75 x 2” | | |
| RGMA048 | 75 x 2”½ | | |
| RGMA049 | 75 x 3” | | |
| RGMA050 | 90 x 2” | | |
| RGMA051 | 90 x 2”½ | | |
| RGMA052 | 90 x 3” | | |
| RGMA053 | 110 x 2” | | |
| RGMA054 | 110 x 3” | | |
| RGMA055 | 110 x 4” | | |

## T - 90°

| Code | Ø mm | PFA | P. |
|---|---|---|---|
| RTEA010 | 16 x 16 x 16 | 10 | 10 |
| RTEA011 | 20 x 20 x 20 | | |
| RTEA012 | 25 x 25 x 25 | | |
| RTEA013 | 32 x 32 x 32 | | |
| RTEA014 | 40 x 40 x 40 | | 1 |
| RTEA015 | 50 x 50 x 50 | | |
| RTEA016 | 63 x 63 x 63 | | |
| RTEA017 | 75 x 75 x 75 | | |
| RTEA018 | 90 x 90 x 90 | | |
| RTEA019 | 110 x 110 x 110 | | |

## FEMALE THREADED ADAPTOR

| Code | Ø mm | PFA | Pack |
|---|---|---|---|
| RGFA020 | 16 x ½” | 10 | 10 |
| RGFA021 | 16 x ¾” | | |
| RGFA022 | 20 x ½” | | |
| RGFA023 | 20 x ¾” | | |
| RGFA024 | 25 x ¾” | | |
| RGFA025 | 25 x 1” | | |
| RGFA026 | 32 x ¾” | | |
| RGFA027 | 32 x 1” | | |
| RGFA028 | 40 x 1” | | 1 |
| RGFA029 | 40 x 1”¼ | | |
| RGFA030 | 40 x 1”½ | | |
| RGFA031 | 50 x 1”½ | | |
| RGFA032 | 50 x 2” | | |
| RGFA033 | 63 x 2” | | |
| RGFA034 | 75 x 2” | | |
| RGFA035 | 75 x 2”½ | | |
| RGFA036 | 90 x 2” | | |
| RGFA037 | 90 x 3” | | |
| RGFA038 | 90 x 4” | | |
| RGFA039 | 110 x 3” | | |
| RGFA040 | 110 x 4” | 6 | |

## ELBOW 90° female threaded

| Code | Ø mm | PFA | Pack |
|---|---|---|---|
| RGOA080 | 16 x ½” | 10 | 10 |
| RGOA081 | 20 x ½” | | |
| RGOA082 | 20 x ¾” | | |
| RGOA083 | 25 x ½” | | |
| RGOA084 | 25 x ¾” | | |
| RGOA085 | 25 x 1” | | |
| RGOA086 | 32 x ¾” | | |
| RGOA087 | 32 x 1” | | |
| RGOA088 | 32 x 1”¼ | | 1 |
| RGOA089 | 40 x 1”¼ | | |
| RGOA090 | 40 x 1”½ | | |
| RGOA091 | 50 x 1”½ | | |
| RGOA092 | 50 x 2” | | |
| RGOA093 | 63 x 2” | | |
| RGOA094 | 75 x 2” | | |
| RGOA095 | 75 x 2”½ | | |
| RGOA096 | 75 x 3” | | |

## COUPLING

| Code | Ø mm | PFA | Pack |
|---|---|---|---|
| RBGA015 | 16 x 16 | 10 | 10 |
| RBGA016 | 20 x 20 | | |
| RBGA017 | 25 x 25 | | |
| RBGA018 | 32 x 32 | | |
| RBGA019 | 40 x 40 | | 1 |
| RBGA020 | 50 x 50 | | |
| RBGA021 | 63 x 63 | | |
| RBGA022 | 75 x 75 | | |
| RBGA023 | 90 x 90 | | |
| RBGA024 | 110 x 110 | | |

## ELBOW 90° male threaded

| Code | Ø mm | PFA | Pack |
|---|---|---|---|
| RGOA110 | 16 x ½” | 10 | 10 |
| RGOA111 | 16 x ¾” | | |
| RGOA112 | 20 x ½” | | |
| RGOA113 | 20 x ¾” | | |
| RGOA114 | 25 x ½” | | |
| RGOA115 | 25 x ¾” | | |
| RGOA116 | 25 x 1” | | |
| RGOA117 | 32 x ½” | | |
| RGOA118 | 32 x ¾” | | |
| RGOA119 | 32 x 1” | | 1 |
| RGOA120 | 40 x 1” | | |
| RGOA121 | 40 x 1”¼ | | |
| RGOA122 | 40 x 1”½ | | |
| RGOA123 | 50 x 1”½ | | |
| RGOA124 | 50 x 2” | | |
| RGOA125 | 63 x 2” | | |
| RGOA126 | 75 x 2”½ | | |
| RGOA127 | 75 x 3” | | |
| RGOA128 | 90 x 3” | | |
| RGOA129 | 110 x 4” | | |

# FITTINGS

## T FEMALE THREADED

| Code | Ø mm | PFA | Pack |
|---|---|---|---|
| RTFA030 | 16 x ½" x 16 | 10 | 10 |
| RTFA031 | 16 x ¾" x 16 | | |
| RTFA032 | 20 x ½" x 20 | | |
| RTFA033 | 20 x ¾" x 20 | | |
| RTFA034 | 25 x ½" x 25 | | |
| RTFA035 | 25 x ¾" x 25 | | |
| RTFA036 | 25 x 1" x 25 | | |
| RTFA037 | 32 x ½" x 32 | | |
| RTFA038 | 32 x ¾" x 32 | | |
| RTFA039 | 32 x 1" x 32 | | |
| RTFA040 | 40 x 1" x 40 | | 1 |
| RTFA041 | 40 x 1"¼ x 40 | | |
| RTFA042 | 40 x 1"½ x 40 | | |
| RTFA043 | 50 x 1"½ x 50 | | |
| RTFA044 | 50 x 2" x 50 | | |
| RTFA045 | 63 x 2" x 63 | | |
| RTFA046 | 75 x 2" x 75 | | |
| RTFA047 | 75 x 2"½ x 75 | | |
| RTFA048 | 75 x 3" x 75 | | |
| RTFA049 | 90 x 3" x 90 | | |
| RTFA050 | 110 x 4" x 110 | 6 | |

## T MALE THREADED

| Code | Ø mm | PFA | Pack |
|---|---|---|---|
| RTMA020 | 20 x ½" x 20 | 10 | 10 |
| RTMA021 | 20 x ¾" x 20 | | |
| RTMA022 | 25 x ½" x 25 | | |
| RTMA023 | 25 x ¾" x 25 | | |
| RTMA024 | 32 x ¾" x 32 | | |
| RTMA025 | 32 x 1" x 32 | | 1 |
| RTMA026 | 40 x 1" x 40 | | |
| RTMA027 | 40 x 1"¼ x 40 | | |
| RTMA028 | 40 x 1"½ x 40 | | |
| RTMA029 | 50 x 1"½ x 50 | | |
| RTMA030 | 50 x 2" x 50 | | |
| RTMA031 | 50 x 2" x 50 | | |

## ELBOW 90°

| Code | Ø mm | PFA | Pack |
|---|---|---|---|
| RGOA009 | 16 x 16 | 10 | 10 |
| RGOA010 | 20 x 20 | | |
| RGOA011 | 25 x 25 | | |
| RGOA012 | 32 x 32 | | |
| RGOA013 | 40 x 40 | | 1 |
| RGOA014 | 50 x 50 | | |
| RGOA015 | 63 x 63 | | |
| RGOA016 | 75 x 75 | | |
| RGOA017 | 90 x 90 | | |
| RGOA018 | 110 x 110 | | |

## ELBOW 90°
**female elbow**

| Code | Ø mm | PFA | Pack |
|---|---|---|---|
| RGOA150 | 20 x ½" x 20 | 10 | 10 |
| RGOA151 | 25 x ½" x 25 | | |
| RGOA152 | 25 x ¾" x 25 | | |

## END CAP

| Code | Ø mm | PFA | Pack |
|---|---|---|---|
| RTTA010 | 25 | 10 | 10 |
| RTTA011 | 32 | | |
| RTTA012 | 40 | | 1 |
| RTTA013 | 50 | | |
| RTTA014 | 63 | | |
| RTTA015 | 75 | | |
| RTTA016 | 90 | | |
| RTTA017 | 110 | | |

## REDUCTION SET

| Code | Ø mm | PFA | Pack |
|---|---|---|---|
| RRDA001 | 25 x 20 | 10 | 10 |
| RRDA002 | 32 x 20 | | |
| RRDA003 | 32 x 25 | | |
| RRDA004 | 40 x 32 | | |
| RRDA005 | 50 x 25 | | |
| RRDA011 | 50 x 32 | | |
| RRDA006 | 50 x 40 | | |
| RRDA007 | 63 x 25 | | 5 |
| RRDA008 | 63 x 32 | | |
| RRDA009 | 63 x 40 | | |
| RRDA010 | 63 x 50 | | |

## CLOSER ADAPTOR

| Code | Ø mm | PFA | Pack |
|---|---|---|---|
| RADA001 | 20 | 10 | 10 |
| RADA002 | 25 | | |
| RADA003 | 32 | | |
| RADA004 | 40 | | |
| RADA005 | 50 | | |
| RADA006 | 63 | | |

**PFA (Allowable Operating Pressure) is the maximum hydrostatic pressure that a component is capable of sustaining during operation (UNI EN 805).**

# BLACK AND WHITE FITTINGS SERIES PFA16

PLASSON

**TECHNICAL DATA**:
Comply with: UNI 9561 (drinking water) – UNI EN ISO 15494 (industrial fluids) – Body: (PPB)black hi-grade polypropylene – Backnut: black/grey hi-grade polypropylene – Gaskets: (NBR) black nitrile rubber –rubber ethylene propylene (EPDM) – Clamping claw ring: polyacetal – SAE 304 s/s reinforced ring: on the female threaded hereinafter 1" ¼ - Destination: PEBD PE63 PE80 PE100 pipes – Allowable pressure: indicated in bar (water temperature 20°)in the table.

## MALE FITTING

| Code | Ø | PFA | Pack |
|---|---|---|---|
| RGM031 | 16 x ⅜" | 16 | 10 |
| RGM001 | 16 x ½" | | |
| RGM002 | 16 x ¾" | | |
| RGM003 | 20 x ½" | | |
| RGM004 | 20 x ¾" | | |
| RGM005 | 20 x 1" | | |
| RGM006 | 25 x ½" | | |
| RGM007 | 25 x ¾" | | |
| RGM008 | 25 x 1" | | |
| RGM009 | 32 x ¾" | | 5 |
| RGM010 | 32 x 1" | | |
| RGM011 | 32 x 1"¼ | | |
| RGM032 | 32 x 1"½ | | |
| RGM012 | 40 x 1" | | 1 |
| RGM013 | 40 x 1"¼ | | |
| RGM014 | 40 x 1"½ | | |
| RGM015 | 40 x 2" | | |
| RGM034 | 50 x 1" | | |
| RGM016 | 50 x 1"¼ | | |
| RGM017 | 50 x 1"½ | | |
| RGM018 | 50 x 2" | | |
| RGM035 | 63 x 1"¼ | | |
| RGM019 | 63 x 1"½ | | |
| RGM020 | 63 x 2" | | |
| RGM021 | 63 x 2"½ | | |
| RGM022 | 75 x 2" | | |
| RGM023 | 75 x 2"½ | | |
| RGM024 | 75 x 3" | | |
| RGM025 | 90 x 2" | | |
| RGM029 | 90 x 2"½ | | |
| RGM026 | 90 x 3" | | |
| RGM033 | 90 x 4" | | |
| RGM030 | 110 x 2" | | |
| RGM028 | 110 x 3" | | |
| RGM027 | 110 x 4" | | |

## 90° REDUCER ELBOW•

| Code | Ø | PFA | Pack |
|---|---|---|---|
| RGO011 | 25 x 20 | 16 | 10 |

• Programmed delivery

## 45° MALE THREADED DERIVATION ELBOW

| Code | Ø | PFA | Pack |
|---|---|---|---|
| RGO013 | 20 x ½" | 16 | 10 |
| RGO014 | 20 x ¾" | | |

## FEMALE FITTING

| Code | Ø | PFA | Pack |
|---|---|---|---|
| RGF001 | 16 x ½" | 16 | 10 |
| RGF002 | 16 x ¾" | | |
| RGF003 | 20 x ½" | | |
| RGF004 | 20 x ¾" | | |
| RGF005 | 20 x 1" | | |
| RGF007 | 25 x ¾" | | |
| RGF008 | 25 x 1" | | |
| RGF009 | 32 x ¾" | | 5 |
| RGF010 | 32 x 1" | | |
| RGF011 | 32 x 1"¼ | | |
| RGF012 | 40 x 1" | | 1 |
| RGF013 | 40 x 1"¼ | | |
| RGF014 | 40 x 1"½ | | |
| RGF022 | 50 x 1"¼ | | |
| RGF015 | 50 x 1"½ | | |
| RGF016 | 50 x 2" | | |
| RGF027 | 63 x 1"¼ | | |
| RGF025 | 63 x 1"½ | | |
| RGF017 | 63 x 2" | | |
| RGF018 | 75 x 2" | | |
| RGF019 | 75 x 2"½ | | |
| RGF020 | 90 x 2" | | |
| RGF023 | 90 x 3" | | |
| RGF026 | 90 x 4" | 6 | |
| RGF024 | 110 x 3" | 16 | |
| RGF021 | 110 x 4" | 6 | |

Reinforced rings on female threaded from 1"¼ to 4"

## 90° ELBOW

| Code | Ø | PFA | Pack |
|---|---|---|---|
| RGO001 | 16 | 16 | 10 |
| RGO002 | 20 | | |
| RGO003 | 25 | | |
| RGO004 | 32 | | 5 |
| RGO005 | 40 | | 1 |
| RGO006 | 50 | | |
| RGO007 | 63 | | |
| RGO008 | 75 | | |
| RGO009 | 90 | | |
| RGO010 | 110 | | |
| RGO012 | 160 | 10 | |

## MALE THREADED DERIVATION ELBOW

| Code | Ø | PFA | Pack |
|---|---|---|---|
| RGO050 | 20 x ½" | 16 | 10 |
| RGO051 | 20 x ¾" | | |
| RGO062 | 25 x ½" | | |
| RGO052 | 25 x ¾" | | |
| RGO061 | 25 x 1" | | |
| RGO053 | 32 x 1" | | 5 |
| RGO060 | 40 x 1" | | 1 |
| RGO054 | 40 x 1"¼ | | |
| RGO058 | 40 x 1"½ | | |
| RGO063 | 50 x 1" | | |
| RGO055 | 50 x 1"¼ | | |
| RGO056 | 50 x 1"½ | | |
| RGO069 | 63 x 1"¼ | | |
| RGO066 | 63 x 1"½ | | |
| RGO057 | 63 x 2" | | |
| RGO064 | 75 x 2"½ | | |
| RGO065 | 75 x 3" | | |
| RGO067 | 90 x 3" | | |
| RGO068 | 110 x 4" | | |

## FEMALE THREADED DERIVATION ELBOW

| Code | Ø | PFA | Pack |
|---|---|---|---|
| RGO020 | 16 x ½" | 16 | 10 |
| RGO022 | 20 x ½" | | |
| RGO023 | 20 x ¾" | | |
| RGO024 | 25 x ½" | | |
| RGO025 | 25 x ¾" | | |
| RGO026 | 25 x 1" | | |
| RGO028 | 32 x ¾" | | 5 |
| RGO029 | 32 x 1" | | |
| RGO030 | 32 x 1"¼ | | 1 |
| RGO032 | 40 x 1" | | |
| RGO033 | 40 x 1"¼ | | |
| RGO034 | 40 x 1"½ | | |
| RGO035 | 40 x 2" | | |
| RGO042 | 50 x 1" | | |
| RGO041 | 50 x 1"¼ | | |
| RGO036 | 50 x 1"½ | | |
| RGO037 | 50 x 2" | | |
| RGO046 | 63 x 1"¼ | | |
| RGO043 | 63 x 1"½ | | |
| RGO038 | 63 x 2" | | |
| RGO039 | 75 x 2" | | |
| RGO040 | 75 x 2"½ | | |
| RGO045 | 75 x 3" | | |

Reinforced rings on female threaded from 1"¼ to 3"

# FITTINGS

## SOCKET

| Code | Ø | PFA | Pack |
|---|---|---|---|
| RBG001 | 16 | 16 | 10 |
| RBG002 | 20 | | |
| RBG003 | 25 | | |
| RBG004 | 32 | | 5 |
| RBG005 | 40 | | 1 |
| RBG006 | 50 | | |
| RBG007 | 63 | | |
| RBG008 | 75 | | |
| RBG009 | 90 | | |
| RBG010 | 110 | | |
| RBG011 | 125 | | |
| RBG012 | 160 | 10 | |

## REDUCER SET

| Code | Ø | PFA | Pack |
|---|---|---|---|
| RRD300 | 25 x 20 | 16 | 10 |
| RRD301 | 32 x 20 | | |
| RRD302 | 32 x 25 | | |
| RRD303 | 40 x 32 | | |
| RRD304• | 50 x 25 | | 5 |
| RRD305 | 50 x 32 | | |
| RRD306 | 50 x 40 | | |
| RRD307• | 63 x 25 | | 1 |
| RRD308 | 63 x 32 | | |
| RRD309 | 63 x 40 | | |
| RRD310 | 63 x 50 | | |
| RRD311 | 75 x 63 | | |
| RRD312• | 110 x 63 | | |
| RRD313 | 110 x 75 | | |
| RRD314 | 110 x 90 | | |

• Programmed delivery

## MODULAR ADAPTOR

| Code | Ø | PFA | Pack |
|---|---|---|---|
| RAM001 | 20 | 16 | 10 |
| RAM002 | 25 | | |
| RAM003 | 32 | | 5 |
| RAM004 | 40 | | |
| RAM005 | 50 | | |
| RAM006 | 63 | | |

## END LINE

| Code | Ø | PFA | Pack |
|---|---|---|---|
| RTT001 | 20 | 16 | 10 |
| RTT002 | 25 | | |
| RTT003 | 32 | | 5 |
| RTT004 | 40 | | 1 |
| RTT005 | 50 | | |
| RTT006 | 63 | | |
| RTT009 | 75 | | |
| RTT007 | 90 | | |
| RTT010 | 110 | | |

## REDUCER SOCKET

| Code | Ø | PFA | Pack |
|---|---|---|---|
| RMR013 | 20 x 16 | 16 | 10 |
| RMR019 | 25 x 16 | | |
| RMR001 | 25 x 20 | | 5 |
| RMR002 | 32 x 20 | | |
| RMR003 | 32 x 25 | | 1 |
| RMR004 | 40 x 25 | | |
| RMR005 | 40 x 32 | | |
| RMR012 | 50 x 25 | | |
| RMR006 | 50 x 32 | | |
| RMR007 | 50 x 40 | | |
| RMR014 | 63 x 25 | | |
| RMR015 | 63 x 32 | | |
| RMR008 | 63 x 40 | | |
| RMR009 | 63 x 50 | | |
| RMR010 | 75 x 50 | | |
| RMR011 | 75 x 63 | | |
| RMR016 | 90 x 63 | | |
| RMR017 | 90 x 75 | | |
| RMR018 | 110 x 90 | | |

## 45° T FITTING

| Code | Ø | PFA | Pack |
|---|---|---|---|
| RTE015 | 63 | 16 | 1 |
| RTE016 | 75 | | |
| RTE017 | 90 | | |
| RTE018 | 110 | | |

## 45° ELBOW

| Code | Ø | PFA | Pack |
|---|---|---|---|
| RGO015 | 32 | 16 | 5 |
| RGO016 | 40 | | |
| RGO017 | 50 | | 1 |
| RGO020 | 63 | | |
| RGO019 | 75 | | |
| RGO018 | 90 | | |
| RGO021 | 110 | | |

## PLAQUE ELBOW

| Code | Ø | PFA | Pack |
|---|---|---|---|
| RPL003 | 16 x ½" | 16 | 1 |
| RPL001 | 20 x ½" | | |
| RPL002 | 20 x ¾" | | |

## REPAIR SOCKET

| Code | Ø | PFA | Pack |
|---|---|---|---|
| RGB100 | 20 | 16 | 10 |
| RGB101 | 25 | | |
| RGB102 | 32 | | 5 |
| RGB103 | 40 | | 1 |
| RGB104 | 50 | | |
| RGB105 | 63 | | |
| RGB106 | 75 | | |
| RGB107 | 90 | | |
| RGB108 | 110 | | |
| RGB109 | 125 | | |
| RGB110 | 160 | | |

## ADAPTOR•

| Code | Ø | PFA | Pack |
|---|---|---|---|
| RAD060 | 25 x ½" | 16 | 1 |
| RAD061 | 25 x ¾" | | |
| RAD062 | 32 x ½" | | |
| RAD063 | 32 x ¾" | | |
| RAD064 | 32 x 1" | | |
| RAD065 | 40 x 1" | | |
| RAD066 | 40 x 1"¼ | | |
| RAD067 | 40 x 1"½ | | |
| RAD068 | 50 x 1" | | |
| RAD069 | 50 x 1"¼ | | |
| RAD070 | 50 x 1"½ | | |
| RAD071 | 50 x 2" | | |
| RAD072 | 63 x 1" | | |
| RAD073 | 63 x 1"¼ | | |
| RAD074 | 63 x 1"½ | | |
| RAD075 | 63 x 2" | | |
| RAD076 | 63 x 2"½ | | |
| RAD077 | 75 x 1"½ | | |
| RAD078 | 75 x 2" | | |
| RAD079 | 75 x 2"½ | | |
| RAD080 | 75 x 3" | | |

• Programmed delivery

## ELBOW ADAPTOR•

| Code | Ø | PFA | Pack |
|---|---|---|---|
| RGO070 | 40 x 40 | 16 | 1 |
| RGO071 | 40 x 50 | | |
| RGO072 | 50 x 40 | | |
| RGO073 | 50 x 50 | | |
| RGO074 | 63 x 40 | | |
| RGO075 | 63 x 50 | | |

• Programmed delivery

## FEMALE THREADED DERIVATION T FITTING

| Code | Ø | PFA | Pack |
|---|---|---|---|
| RTF024 | 16 x ½" x 16 | 16 | 10 |
| RTF020 | 16 x ¾" x 16 | | |
| RTF001 | 20 x ½" x 20 | | |
| RTF002 | 20 x ¾" x 16 | | |
| RTF003 | 20 x ¾" x 20 | | |
| RTF004 | 25 x ½" x 25 | | 5 |
| RTF027 | 25 x ¾" x 20 | | |
| RTF006 | 25 x ¾" x 25 | | |
| RTF007 | 25 x 1" x 25 | | |
| RTF028 | 25 x 1"¼ x 25 | | |
| RTF026 | 32 x 1" x 25 | | |
| RTF008 | 32 x ¾" x 32 | | |
| RTF009 | 32 x 1" x 32 | | |
| RTF010 | 32 x 1"¼ x 32 | | |
| RTF018 | 32 x 1"½ x 32 | | |
| RTF011 | 40 x 1" x 40 | | 1 |
| RTF012 | 40 x 1"¼ x 40 | | |
| RTF013 | 40 x 1"½ x 40 | | |
| RTF029 | 40 x 2" x 40 | | |
| RTF014 | 50 x 1"½ x 50 | | |
| RTF015 | 50 x 2" x 50 | | |
| RTF030 | 63 x 1"¼ x 63 | | |
| RTF025 | 63 x 1"½ x 63 | | |
| RTF016 | 63 x 2" x 63 | | |
| RTF019 | 75 x 2" x 75 | | |
| RTF017 | 75 x 2"½ x 75 | | |
| RTF022 | 75 x 3" x 75 | | |
| RTF023 | 90 x 3" x 90 | | |
| RTF021 | 110 x 4" x 110 | 6 | |

Reinforced rings on female threaded from da 1"¼ to 4"

## REDUCED T FITTING

| Code | Ø | PFA | Pack |
|---|---|---|---|
| RTR011 | 20 x 16 x 20 | 16 | 5 |
| RTR001 | 25 x 20 x 25 | | |
| RTR013 | 25 x 32 x 25 | | |
| RTR009 | 32 x 25 x 32 | | |
| RTR012 | 40 x 25 x 40 | | 1 |
| RTR003 | 40 x 32 x 40 | | |
| RTR014 | 50 x 25 x 50 | | |
| RTR008 | 50 x 32 x 50 | | |
| RTR004 | 50 x 40 x 50 | | |
| RTR007 | 63 x 32 x 63 | | |
| RTR016 | 63 x 40 x 63 | | |
| RTR005 | 63 x 50 x 63 | | |
| RTR006 | 75 x 63 x 75 | | |

## MALE THREADED DERIVATION T FITTING

| Code | Ø | PFA | Pack |
|---|---|---|---|
| RTM001 | 20 x ½" x 20 | 16 | 10 |
| RTM002 | 20 x ¾" x 20 | | |
| RTM006 | 25 x ½" x 25 | | 5 |
| RTM003 | 25 x ¾" x 25 | | |
| RTM004 | 32 x 1" x 32 | | 1 |
| RTM005 | 40 x 1"¼ x 40 | | |
| RTM016 | 40 x 1"½ x 40 | | |
| RTM017 | 50 x 1"½ x 50 | | |
| RTM020 | 63 x 1"¼ x 63 | | |
| RTM019 | 63 x 1"½ x 63 | | |
| RTM018 | 63 x 2" x 63 | | |

## 90° T FITTING

| Code | Ø | PFA | Pack |
|---|---|---|---|
| RTE001 | 16 | 16 | 10 |
| RTE002 | 20 | | |
| RTE003 | 25 | | 5 |
| RTE004 | 32 | | |
| RTE005 | 40 | | 1 |
| RTE006 | 50 | | |
| RTE007 | 63 | | |
| RTE008 | 75 | | |
| RTE009 | 90 | | |
| RTE010 | 110 | | |
| RTE012 | 160 | 5 | |

## REPAIR T FITTING•

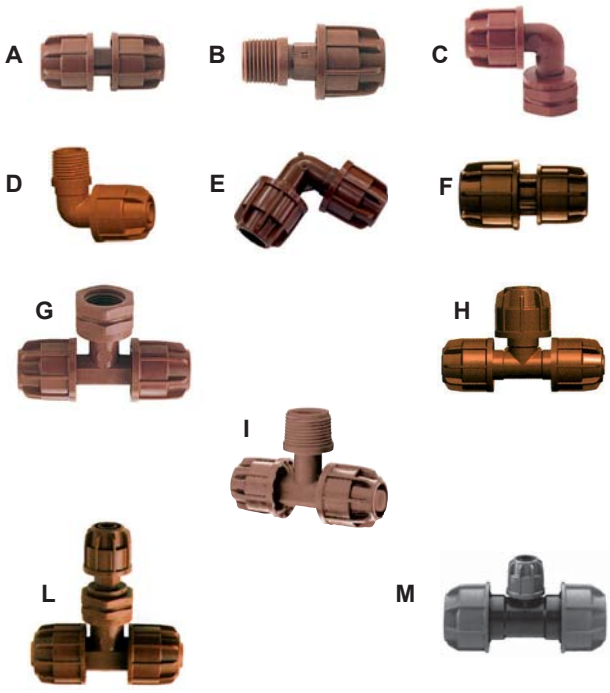
| Code | Ø | PFA | Pack |
|---|---|---|---|
| RTR102 | 20 | 16 | 10 |
| RTR101 | 25 | | 5 |
| RTR103 | 32 | | |
| RTR104 | 40 | | 1 |
| RTR105 | 50 | | |
| RTR106 | 63 | | |

• Programmed delivery

## FITTING FOR DRIPLINE AND PIPE PE WITH SCREW

Pe pipe and dripline **brown colour** fittings – body and backnut: (PP) brown polypropylene – Clamping craw ring: yellow polyacetal – Assembly: to use for pipes wall thickness between 0,7 and 1,8 mm – Allowable pressure: 6 bar water temperature 20° - Threading: ISO 7/.

| Code | Type | Pic. | Ø mm | Pack |
|---|---|---|---|---|
| RBGI050 | Coupling | A | 16 x 16 | 10 |
| RBGI051 | | | 20 x 20 | |
| RGMI050 | Male connection | B | 16 x ½" | |
| RGMI051 | | | 16 x ¾" | |
| RGMI052 | | | 20 x ½" | |
| RGMI053 | | | 20 x ¾" | |
| RGOI050 | Elbow with offtake female threaded | C | 16 x ½" | |
| RGOI051 | | | 16 x ¾" | |
| RGOI052 | Elbow with offtake male threaded | D | 16 x ½" | |
| RGOI053 | | | 16 x ¾" | |
| RGOI049 | Elbow | E | 16 | |
| RMRI001 | Reducer coulping | F | 20 x 16 | |
| RTFI050 | T with offtake female threaded | G | 16 x ½" x 16 | |
| RTFI051 | | | 16 x ¾" x 16 | |
| RTFI052 | | | 20 x ½" x 20 | |
| RTFI053 | | | 20 x ¾" x 20 | |
| RTFI001 | T 90° | H | 16 | |
| RTFI002 | | | 20 | |
| RTMI081 | T with offtake male thread | I | 16 x ¾" x 16 | |
| RTFI003 | T 90° reducer | L | 20 x 16 x 20 | |
| RTFI016 | | M | 20 x 16 x 20 | |
| RTFI017 | | | 25 x 16 x 25 | |
| RTFI018 | | | 32 x 16 x 32 | |




**N.B. LAYFLAT FITTINGS - TAPE SEE ON PAGE 132**

## ▶ POLYPROPYLENE THREADED FITTINGS WITH O-RING

### DESCRIPTION

Solid-design threaded fittings characterized by excellent mechanical properties suitable for long durability and breaking resistance. Available with o-ring (auto) or without.

**WITH O-RING**:
Made in polypropylene
HI-grade.
O-Ring: in EPDM.
Thread: B.S.P.T.

**WITHOUT O-RING**:
Made in Nylon
reinforced with fiberglass

### REDUCER NIPPLE

| | WITH O-RING | | | WITHOUT O-RING | | |
|---|---|---|---|---|---|---|
| Ø | Code | PFA | Pack | Code | PFA | Pack |
| ¾" x ½" | RNP140 | 10 | 1 | RNP050 | 10 | 10 |
| 1" x ½" | RNP144 | | | RNP052 | | |
| 1" x ¾" | RNP141 | | | RNP055 | | |
| 1"¼ x ¾" | RNP145 | 6 | | RNP053 | 6 | |
| 1"¼ x 1" | RNP142 | | | RNP054 | | |
| 1"½ x ¾" | | | | RNP059 | | |
| 1"½ x 1" | RNP143 | 6 | 1 | RNP056 | | |
| 1"½ x 1"¼ | RNP146 | | | RNP051 | | |
| 2" x ¾" | | | | RNP060 | | |
| 2" x 1" | | | | RNP058 | | |
| 2" x 1"¼ | | | | RNP061 | | |
| 2" x 1"½ | RNP149 | 6 | 1 | RNP057 | | |
| 3" x 2"½ | | | | RNP062 | | 5 |

### NIPPLE

| | CON O-RING | | | WITHOUT O-RING | | |
|---|---|---|---|---|---|---|
| Ø | Code | PFA | Pack | Code | PFA | Pack |
| ½" | RNP131 | 10 | 1 | RNP100 | 10 | 10 |
| ¾" | RNP132 | | | RNP101 | | |
| 1" | RNP133 | | | RNP102 | | |
| 1"¼ | RNP134 | 6 | | RNP103 | 6 | |
| 1"½ | RNP135 | | | RNP104 | | |
| 2" | RNP136 | | | RNP105 | | |
| 2"½ | | | | RNP106 | | 1 |
| 3" | | | | RNP107 | | |
| 4" | | | | RNP108 | | |

### COUPLING

| | WITH O-RING | | | WITHOUT O-RING | | |
|---|---|---|---|---|---|---|
| Ø | Code | PFA | Pack | Code | PFA | Pack |
| ½" | RMF130 | 10 | 1 | RMF100 | 10 | 10 |
| ¾" | RMF131 | | | RMF101 | | |
| 1" | RMF132 | | | RMF102 | | |
| 1"¼ | RMF134 | 6 | | RMF103 | 6 | |
| 1"½ | RMF135 | | | RMF104 | | |
| 2" | RMF136 | | | RMF105 | | |
| 2"½ | | | | RMF106 | | 1 |
| 3" | | | | RMF107 | | |

### ELBOW 90°

| | WITH O-RING | | | WITHOUT O-RING | | |
|---|---|---|---|---|---|---|
| Ø | Code | PFA | Pack | Code | PFA | Pack |
| ½" | RGO160 | 10 | 1 | RGO200 | 10 | 10 |
| ¾" | RGO161 | | | RGO201 | | |
| 1" | RGO162 | | | RGO202 | | |
| 1"¼ | RGO163 | 6 | | RGO203 | 6 | |
| 1"½ | RGO164 | | | RGO204 | | |
| 2" | RGO165 | | | RGO205 | | |
| 2"½ | | | | RGO206 | | 1 |
| 3" | | | | RGO207 | | |

### T - 90°

| | WITH O-RING | | | WITHOUT O-RING | | |
|---|---|---|---|---|---|---|
| Ø | Code | PFA | Pack | Code | PFA | Pack |
| ½" | RTE130 | 10 | 1 | RTE150 | 10 | 10 |
| ¾" | RTE131 | | | RTE151 | | |
| 1" | RTE132 | | | RTE152 | | |
| 1"¼ | RTE133 | 6 | | RTE155 | 6 | |
| 1"½ | RTE134 | | | RTE153 | | |
| 2" | RTE135 | | | RTE154 | | |
| 2"½ | | | | RTE156 | | 1 |
| 3" | | | | RTE157 | | |

### PLUG

| | WITH O-RING | | | WITHOUT O-RING | | |
|---|---|---|---|---|---|---|
| Ø | Code | PFA | Pack | Code | PFA | Pack |
| ½" | RTA130 | 10 | 1 | RTA100 | 10 | 10 |
| ¾" | RTA131 | | | RTA101 | | |
| 1" | RTA132 | | | RTA102 | | |
| 1"¼ | RTA133 | 6 | | RTA103 | 6 | |
| 1"½ | RTA134 | | | RTA104 | | |
| 2" | RTA135 | | | RTA105 | | |
| 2"½ | | | | RTA120 | | 1 |
| 3" | | | | RTA121 | | |

### CAP

| | WITHOUT O-RING | | |
|---|---|---|---|
| Ø | Code | PFA | Pack |
| ½" | RTA106 | 10 | 10 |
| ¾" | RTA107 | | |
| 1" | RTA108 | | |
| 1"¼ | RTA109 | 6 | |
| 1"½ | RTA110 | | |
| 2" | RTA111 | | |
| 2"½ | RTA125 | | 1 |
| 3" | RTA126 | | |
| 4" | RTA127 | | |

## REDUCER M/F

| Ø | WITHOUT O-RING Code | PFA | Pack | Ø | Code | PFA | Pack |
|---|---|---|---|---|---|---|---|
| ¾" x ½" | RRD050 | 10 | 10 | 2" x ½" | RRD064 | 6 | 10 |
| 1" x ½" | RRD051 | | | 2" x ¾" | RRD060 | | |
| 1" x ¾" | RRD052 | | | 2" x 1" | RRD061 | | |
| 1"¼ x ½" | RRD058 | 6 | | 2" x 1"¼ | RRD065 | | |
| 1"¼ x ¾" | RRD054 | | | 2" x 1"½ | RRD063 | | |
| 1"¼ x 1" | RRD055 | | | 3" x 2" | RRD066 | | 1 |
| 1"½ x ½" | RRD056 | | | 3" x 2"½ | RRD067 | | |
| 1"½ x ¾" | RRD057 | | | 4" x 2" | RRD068 | | |
| 1"½ x 1" | RRD059 | | | 4" x 2"½ | RRD049 | | |
| 1"½ x 1"¼ | RRD053 | | | 4" x 3" | RRD069 | | |

## REDUCER COUPLING

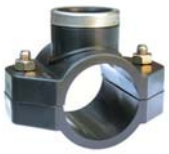
| Ø | WITHOUT O-RING Code | PFA | Pack |
|---|---|---|---|
| ¾" x ½" | RMR050 | 10 | 10 |
| 1" x ½" | RMR051 | | |
| 1" x ¾" | RMR052 | | |
| 1"¼ x ¾" | RMR053 | 6 | |
| 1"¼ x 1" | RMR054 | | |
| 1"½ x ¾" | RMR055 | | |
| 1"½ x 1" | RMR056 | | |
| 1"½ x 1"¼ | RMR057 | | |
| 2" x ¾" | RMR058 | | |
| 2" x 1" | RMR059 | | |
| 2" x 1"¼ | RMR060 | | |
| 2" x 1"½ | RMR061 | | |

## ► CLAMP SADDLE

**Material:** black Polypropylene (PP) • **Bolts:** galvanized stainless steel • **Seal O-ring:** Nitrile Rubber 70 sh.

**Without Inox reinforce**

**With Inox reinforce**



**With reinforce ring and inox bolts + anti-torsion pipe system**

| Ø | PLASSON With Inox reinforce Code | PFA | Pack | PLASSON Without Inox reinforce Code | PFA | Pack | SPS without reinforcing ring* Code | PFA | Pack | SPS with reinforcing ring and inox bolts + no torsion pipe system Code | PFA | Pack |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 x ½" | RPS099 | 12,5 | 400 | RPS001 | 10 | 400 | | | | | | |
| 25 x ½" | RPS103 | | 300 | RPS002 | | 300 | RPS501 | 10 | 200 | RPS301 | 16 | 180 |
| 25 x ¾" | RPS102 | | | RPS003 | | | RPS502 | | | RPS302 | | |
| 32 x ½" | RPS100 | | 150 | RPS004 | | 150 | RPS503 | | 150 | RPS303 | | 150 |
| 32 x ¾" | RPS106 | | | RPS005 | | | RPS504 | | | RPS304 | | |
| 32 x 1" | RPS101 | | | RPS006 | | | RPS505 | | 120 | RPS305 | | 120 |
| 40 x ½" | RPS104 | | | RPS007 | | | RPS506 | | | RPS306 | | 100 |
| 40 x ¾" | RPS105 | | | RPS008 | | | RPS507 | | | RPS307 | | |
| 40 x 1" | RPS127 | | | RPS009 | | | RPS508 | | | RPS308 | | |
| 50 x ½" | RPS107 | | 100 | RPS010 | | 100 | RPS509 | | 100 | RPS309 | | 80 |
| 50 x ¾" | RPS108 | | | RPS011 | | | RPS510 | | | RPS300 | | |
| 50 x 1" | RPS109 | | | RPS012 | | | RPS511 | | | RPS310 | | |
| 50 x 1"¼ | RPS130 | | | RPS034 | 6 | | | | | | | |
| 63 x ½" | RPS110 | | 70 | RPS013 | 10 | 70 | RPS513 | 10 | 50 | RPS311 | 16 | 50 |
| 63 x ¾" | RPS111 | | | RPS014 | | | RPS514 | | | RPS312 | | |
| 63 x 1" | RPS112 | | | RPS015 | | | RPS515 | | | RPS313 | | |
| 63 x 1"¼ | RPS114 | | | RPS017 | 6 | | RPS516 | 6 | | RPS314 | | |
| 63 x 1"½ | RPS113 | | 60 | RPS016 | | 60 | RPS517 | | 40 | RPS315 | | 40 |
| 75 x ½" | RPS115 | | | RPS018 | 10 | | RPS518 | 10 | | RPS316 | | |
| 75 x ¾" | RPS116 | | 55 | RPS019 | | 55 | RPS519 | | | RPS317 | | |
| 75 x 1" | RPS117 | 10 | | RPS020 | | | RPS520 | | | RPS318 | | |
| 75 x 1"¼ | RPS118 | | | RPS021 | 6 | | RPS521 | 6 | | RPS319 | | |
| 75 x 1"½ | RPS119 | | 50 | RPS022 | | 50 | RPS522 | | 35 | RPS320 | | 35 |
| 75 x 2" | RPS120 | | | RPS029 | | | RPS523 | | 30 | RPS321 | | 30 |
| 90 x ½" | RPS121 | 12,5 | 45 | RPS024 | 10 | 45 | RPS524 | | | RPS322 | | |
| 90 x ¾" | RPS122 | | | RPS025 | | | RPS525 | | | RPS323 | | |
| 90 x 1" | RPS123 | 10 | | RPS026 | | | RPS526 | | | RPS324 | | |
| 90 x 1"¼ | RPS142 | | 40 | RPS030 | 6 | 40 | RPS527 | | | RPS325 | | |
| 90 x 1"½ | RPS128 | | | RPS028 | | | RPS528 | | 25 | RPS326 | | 25 |
| 90 x 2" | RPS124 | | | RPS027 | | | RPS529 | | | RPS327 | | |

* Clamp saddle bulk on request

## ► STAINLESS STEEL TARRED FITTINGS FOR UNDERGROUND LINES HEIGHT MT1•

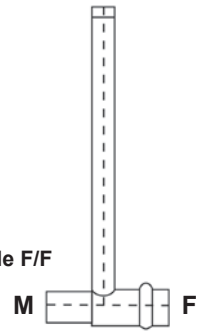
### ELBOW LINE HYDRANT

available M

| Code | ø | Pack |
|---|---|---|
| AID123 | 110 x 4” | 1 |
| AID124 | 125 x 4” | |
| AID125 | 140 x 4” | |
| AID126 | 160 x 4” | |

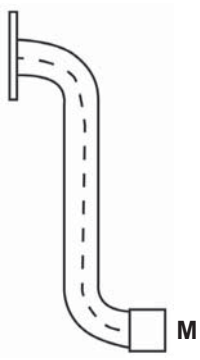
### T-LINE HYDRANT

available F/F




| Code | ø | Pack |
|---|---|---|
| AID073 | 110 x 4” | 1 |
| AID074 | 125 x 4” | |
| AID075 | 140 x 4” | |
| AID076 | 160 x 4” | |

### S FLANGED UNION FOR MALE

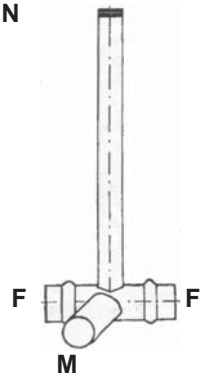



| Code | ø | Pack |
|---|---|---|
| ATL117 | 80 x 90 | 1 |
| ATL109 | 110 x 110 | |
| ATL111 | 110 x 125 | |
| ATL114 | 125 x 125 | |
| ATL116 | 125 x 140 | |
| ATL119 | 150 x 140 | |
| ATL120 | 150 x 200 | |

**Other types and size on request**

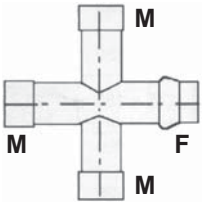
### HYDRANT LINE ON TEE

| Ø |
|---|
| 75 x 2” ÷ 315 x 6” |




### CROSS M/M/M/M/F

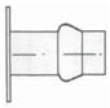
| Ø |
|---|
| 75 ÷ 315 |




available M/M/M/M or M/F/M/F

### BOUT FEMALE

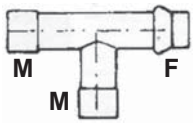
| Ø |
|---|
| 80 x 75 ÷ 300 x 315 |



available M

### TEE M/M/F

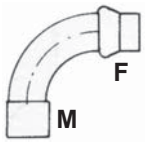
| Ø |
|---|
| 63 ÷ 315 |




available M/M/M or F/M/F or F/F/F

### ELBOW M/F

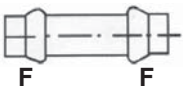
| Ø |
|---|
| 75 ÷ 315 |




available M/M or F/F or flange/flange

### PASSING F/F

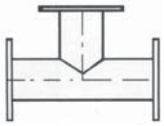
| Ø |
|---|
| 75 ÷ 500 |




available M/M or M/F

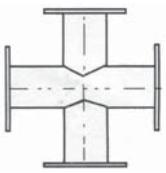
### T FLANGED

| Ø |
|---|
| 65 ÷ 300 |



### CROSS FLANGED

| Ø |
|---|
| 65 ÷ 300 |



### SEAL FOR PASSING FEMALE FOR PVC

| Ø |
|---|
| 75 ÷ 500 |

**HYDRANT HEADS AND CURVES SEE ON PAGE 135**

• GALVANIZED ON REQUEST

## ► PVC JOINT ELASTOMERIC FITTINGS

| PROPERTIES | |
|---|---|
| Execution | Butt welding – thermoforming –moulding |
| Raw material | PVC rigid pipe stabilized by Ca-Zn salts for pressure pipelines. Elastomeric rubber gasket |
| MRS | 250 bar |
| Color | RAL7011 grey |
| Coupling system | Spigot with elastomeric joint |
| Certifications | UNI EN 1452 - UNI EN 681-1 |
| Use | Drinking water – pressure fluids |

### 90° T F/F/F PFA10

| Code | ø mm | Pack |
|---|---|---|
| RTE508 | 75 | 1 |
| RTE509 | 90 | |
| RTE510 | 110 | |
| RTE511 | 125 | |
| RTE512 | 140 | |
| RTE513 | 160 | |

### PFA10 SOLVENT CEMENT DERIV. 90° T F/F

| Code | ø mm | Pack |
|---|---|---|
| RTE515 | 75 | 1 |
| RTE516 | 90 | |
| RTE517 | 110 | |
| RTE518 | 125 | |
| RTE519 | 140 | |
| RTE520 | 160 | |

### MALE/FEMALE REDUCER PFA16

| Code | ø mm | | Pack |
|---|---|---|---|
| | Female | Male | |
| RRD360 | 110 | 75 | 1 |
| RRD361 | 125 | 75 | |
| RRD362 | 125 | 90 | |
| RRD363 | 140 | 75 | |
| RRD364 | 140 | 90 | |
| RRD365 | 140 | 110 | |
| RRD366 | 160 | 90 | |
| RRD367 | 160 | 110 | |
| RRD368 | 160 | 125 | |
| RRD369 | 180 | 90 | |
| RRD370 | 180 | 110 | |
| RRD371 | 180 | 125 | |
| RRD372 | 180 | 140 | |
| RRD373 | 200 | 90 | |
| RRD374 | 200 | 110 | |
| RRD376 | 200 | 125 | |
| RRD377 | 200 | 160 | |

### PFA16 SLIDING SOCKET

| Code | ø mm | Pack |
|---|---|---|
| RGB237 | 75 | 1 |
| RGB238 | 90 | |
| RGB239 | 110 | |
| RGB240 | 125 | |
| RGB241 | 140 | |
| RGB242 | 160 | |

### PFA16 BEND 90° M/F

| Code | ø mm | Pack |
|---|---|---|
| RGO251 | 75 | 1 |
| RGO252 | 90 | |
| RGO253 | 110 | |
| RGO254 | 125 | |
| RGO255 | 140 | |
| RGO256 | 160 | |

### PFA16 BEND 40° M/F

| Code | ø mm | Pack |
|---|---|---|
| RGO260 | 75 | 1 |
| RGO261 | 90 | |
| RGO262 | 110 | |
| RGO263 | 125 | |
| RGO264 | 140 | |
| RGO265 | 160 | |

### PFA16 BEND 22°30' M/F

| Code | ø mm | Pack |
|---|---|---|
| RGO266 | 75 | 1 |
| RGO267 | 90 | |
| RGO268 | 110 | |
| RGO270 | 125 | |
| RGO271 | 140 | |
| RGO269 | 160 | |

## ▶ PVC FITTINGS

**Material:** PVC-UH – **Reinforcing rings:** female threaded inox Aisi – **Seals and O-Ring:** EPDM PFA is the max pressure

## SOLVENT WELD FITTING

### SOCKET

| Code | Ø | P. | PFA |
|---|---|---|---|
| RMI015 | 16 | 10 | 16 |
| RMI016 | 20 | | |
| RMI001 | 25 | | |
| RMI002 | 32 | | |
| RMI003 | 40 | | |
| RMI004 | 50 | 5 | |
| RMI005 | 63 | 1 | |
| RMI006 | 75 | | |
| RMI007 | 90 | | |
| RMI008 | 110 | | |
| RMI009 | 125 | | |
| RMI010 | 140 | | |
| RMI011 | 160 | | |
| RMI017 | 180 | | 10 |
| RMI012 | 200 | | |
| RMI013 | 225 | | |
| RMI014 | 250 | | |
| RMI018 | 280 | | |
| RMI019 | 315 | | |
| RMI020 | 400 | | 6 |

### TEE 90°

| Code | Ø | P. | PFA |
|---|---|---|---|
| RTI015 | 16 | 10 | 16 |
| RTI016 | 20 | | |
| RTI001 | 25 | | |
| RTI002 | 32 | | |
| RTI003 | 40 | 5 | |
| RTI004 | 50 | 1 | |
| RTI005 | 63 | | |
| RTI006 | 75 | | |
| RTI007 | 90 | | |
| RTI008 | 110 | | |
| RTI009 | 125 | | |
| RTI010 | 140 | | |
| RTI011 | 160 | | |
| RTI017 | 180 | | 10 |
| RTI012 | 200 | | |
| RTI013 | 225 | | |
| RTI014 | 250 | | |
| RTI019 | 280 | | |
| RTI020 | 315 | | |
| RTI021 | 400 | | 6 |

### ELBOW 90°

| Code | Ø | P. | PFA |
|---|---|---|---|
| RGO129 | 16 | 10 | 16 |
| RGO080 | 20 | | |
| RGO110 | 25 | | |
| RGO111 | 32 | | |
| RGO112 | 40 | | |
| RGO113 | 50 | 1 | |
| RGO114 | 63 | | |
| RGO115 | 75 | | |
| RGO116 | 90 | | |
| RGO117 | 110 | | |
| RGO118 | 125 | | |
| RGO123 | 140 | | |
| RGO119 | 160 | | |
| RGO084 | 180 | | 10 |
| RGO121 | 200 | | |
| RGO081 | 225 | | |
| RGO082 | 250 | | |
| RGO142 | 280 | | |
| RGO127 | 315 | | |
| RGO083 | 400 | | 6 |

### ELBOW 45°

| Code | Ø | P. | PFA |
|---|---|---|---|
| RGO107 | 16 | 10 | 16 |
| RGO140 | 20 | | |
| RGO095 | 25 | | |
| RGO106 | 32 | | |
| RGO096 | 40 | | |
| RGO097 | 50 | 5 | |
| RGO108 | 63 | 1 | |
| RGO102 | 75 | | |
| RGO100 | 90 | | |
| RGO103 | 110 | | |
| RGO101 | 125 | | |
| RGO124 | 140 | | |
| RGO104 | 160 | | |
| RGO109 | 180 | | 10 |
| RGO105 | 200 | | |
| RGO098 | 225 | | |
| RGO099 | 250 | | |
| RGO092 | 280 | | |
| RGO093 | 315 | | |
| RGO094 | 400 | | 6 |

### ELBOW 90° M/F/F

| Code | Ø | P. | PFA |
|---|---|---|---|
| RGO085 | 50x40x50 | 1 | 16 |
| RGO086 | 63x50x63 | | |

### ELBOW 45° M/F/F

| Code | Ø | P. | PFA |
|---|---|---|---|
| RGO087 | 50x40x50 | 1 | 16 |
| RGO088 | 63x50x63 | | |

### BEND 90°

| Code | Ø | P. | PFA |
|---|---|---|---|
| RGO180 | 20 | 5 | 16 |
| RGO181 | 25 | | |
| RGO182 | 32 | | |
| RGO183 | 40 | 1 | |
| RGO184 | 50 | | |
| RGO185 | 63 | | |
| RGO186 | 75 | | |
| RGO187 | 90 | | |
| RGO188 | 110 | | |
| RGO189 | 125 | | 10 |
| RGO190 | 140 | | |
| RGO191 | 160 | | |

### PIPE UNION

| Code | Ø | P. | PFA |
|---|---|---|---|
| RBC400 | 16 | 10 | 16 |
| RBC252 | 20 | | |
| RBC052 | 25 | | |
| RBC053 | 32 | | |
| RBC054 | 40 | 5 | |
| RBC055 | 50 | 1 | |
| RBC056 | 63 | | |
| RBC057 | 75 | | 10 |
| RBC058 | 90 | | |
| RBC059 | 110 | | |

### CROSS 90°

| Code | Ø | P. | PFA |
|---|---|---|---|
| RCR010 | 32 | 1 | 16 |
| RCR011 | 50 | | |
| RCR012 | 63 | | |
| RCR013 | 75 | | |
| RCR014 | 90 | | |
| RCR015 | 110 | | |

### CAP

| Code | Ø | P. | PFA |
|---|---|---|---|
| RTA039 | 16 | 10 | 16 |
| RTA040 | 20 | | |
| RTA041 | 25 | | |
| RTA042 | 32 | | |
| RTA043 | 40 | | |
| RTA044 | 50 | | |
| RTA045 | 63 | 5 | |
| RTA046 | 75 | 1 | |
| RTA047 | 90 | | |
| RTA048 | 110 | | |
| RTA049 | 125 | | |
| RTA050 | 140 | | |
| RTA051 | 160 | | |
| RTA055 | 200 | | 10 |
| RTA056 | 225 | | |
| RTA057 | 250 | | |

### FLANGE ADAPTOR WITH O-RING

| Code | Ø | P. | PFA |
|---|---|---|---|
| RCL001 | 20 | 10 | 16 |
| RCL002 | 25 | | |
| RCL003 | 32 | | |
| RCL004 | 40 | | |
| RCL005 | 50 | | |
| RCL006 | 63 | 1 | |
| RCL007 | 75 | | |
| RCL008 | 90 | | |
| RCL009 | 110 | | |
| RCL010 | 125 | | |
| RCL011 | 140 | | |
| RCL012 | 160 | | |
| RCL013 | 200 | | 10 |
| RCL014 | 225 | | |

### STUB SERRATED

| Code | Ø | P. | PFA |
|---|---|---|---|
| RCL015 | 20 | 10 | 16 |
| RCL016 | 25 | | |
| RCL017 | 32 | | |
| RCL018 | 40 | | |
| RCL019 | 50 | | |
| RCL020 | 63 | 1 | |
| RCL021 | 75 | | |
| RCL022 | 90 | | |
| RCL023 | 110 | | |
| RCL024 | 125 | | |
| RCL025 | 140 | | |
| RCL026 | 160 | | |
| RCL027 | 200 | | 10 |
| RCL028 | 225 | | |

### MALE HOSE ADAPTOR

| Code | Ø | P. | PFA |
|---|---|---|---|
| RPG100 | 12 x 12 | 1 | N.A. |
| RPG101 | 16 x 16 | | |
| RPG102 | 20 x 20 | | |
| RPG103 | 25 x 25 | | |
| RPG104 | 32 x 30 | | |
| RPG105 | 40 x 40 | | |
| RPG106 | 50 x 50 | | |
| RPG107 | 63 x 60 | | |

### MANIFOLD THREE WAY

| Code | Ø | P. | PFA |
|---|---|---|---|
| RCL004 | 63x50x40 | 1 | 16 |

## REDUCED SOCKET M/F/F

| Code | Ø | P. | PFA |
|---|---|---|---|
| RRI001 | 20x16x16 | 10 | 16 |
| RRI200 | 25x20x16 | | |
| RRI003 | 25x20x20 | | |
| RRI004 | 32x25x16 | | |
| RRI005 | 32x25x20 | | |
| RRI006 | 32x25x25 | | |
| RRI201 | 40x32x16 | | |
| RRI202 | 40x32x20 | | |
| RRI203 | 40x32x25 | | |
| RRI007 | 40x32x32 | | |
| RRI020 | 50x40x20 | | |
| RRI204 | 50x40x25 | | |
| RRI008 | 50x40x32 | | |
| RRI009 | 50x40x40 | | |
| RRI205 | 63x50x20 | 1 | |
| RRI206 | 63x50x25 | 5 | |
| RRI207 | 63x50x32 | | |
| RRI208 | 63x50x40 | | |
| RRI010 | 63x50x50 | | |
| RRI209 | 75x63x32 | 1 | |
| RRI210 | 75x63x40 | | |
| RRI024 | 75x63x50 | | |
| RRI023 | 75x63x63 | | |
| RRI211 | 90x75x40 | | |
| RRI212 | 90x75x50 | | |
| RRI022 | 90x75x63 | | |
| RRI011 | 90x75x75 | | |
| RRI213 | 110x90x50 | | |
| RRI100 | 110x90x63 | | |
| RRI013 | 110x90x75 | | |
| RRI012 | 110x90x90 | | |
| RRI214 | 125x110x63 | | |
| RRI021 | 125x110x75 | | |
| RRI015 | 125x110x90 | | |
| RRI016 | 125x110x110 | | |
| RRI215 | 140x125x75 | | |
| RRI216 | 140x125x90 | | |
| RRI017 | 140x125x110 | | |
| RRI217 | 160x140x63 | | |
| RRI218 | 160x140x75 | | |
| RRI219 | 160x140x90 | | |
| RRI018 | 160x140x110 | | |
| RRI019 | 160x140x125 | | |
| RRI220 | 200x180x110 | 10 | 10 |
| RRI221 | 200x180x125 | | |
| RRI222 | 200x180x140 | | |
| RRI223 | 225x200x125 | | |
| RRI224 | 225x200x140 | | |
| RRI014 | 225x200x160 | | |
| RRI225 | 250x225x140 | | |
| RRI226 | 250x225x160 | | |
| RRI227 | 250x225x200 | | |

## REDUCED BUSH M/F

| Code | Ø | P. | PFA |
|---|---|---|---|
| RRI066 | 20 x 16 | 10 | 16 |
| RRI035 | 25 x 16 | | |
| RRI055 | 25 x 20 | | |
| RRI041 | 32 x 16 | | |
| RRI057 | 32 x 20 | | |
| RRI058 | 32 x 25 | | |
| RRI059 | 40 x 20 | | |
| RRI062 | 40 x 25 | | |
| RRI056 | 40 x 32 | | |
| RRI042 | 50 x 20 | 1 | |
| RRI063 | 50 x 25 | 10 | |
| RRI067 | 50 x 32 | | |
| RRI060 | 50 x 40 | | |
| RRI061 | 63 x 32 | | |
| RRI064 | 63 x 40 | | |
| RRI048 | 63 x 50 | | |
| RRI068 | 75 x 40 | 1 | |
| RRI028 | 75 x 50 | | |
| RRI029 | 75 x 63 | | |
| RRI045 | 90 x 50 | | |
| RRI047 | 90 x 63 | | |
| RRI027 | 90 x 75 | | |
| RRI065 | 110 x 63 | | |
| RRI046 | 110 x 75 | | |
| RRI032 | 110 x 90 | | |
| RRI049 | 125 x 75 | | |
| RRI030 | 125 x 90 | | |
| RRI031 | 125 x 110 | | |
| RRI040 | 140 x 90 | | |
| RRI036 | 140 x 110 | | |
| RRI037 | 140 x 125 | | |
| RRI050 | 160 x 90 | | |
| RRI033 | 160 x 110 | | |
| RRI039 | 160 x 125 | | |
| RRI034 | 160 x 140 | | |
| RRI053 | 180 x 110 | 10 | 10 |
| RRI054 | 180 x 125 | | |
| RRI076 | 180 x 140 | | |
| RRI038 | 180 x 160 | | |
| RRI077 | 200 x 110 | | |
| RRI069 | 200 x 125 | | |
| RRI043 | 200 x 160 | | |
| RRI080 | 200 x 180 | | |
| RRI081 | 225 x 160 | | |
| RRI075 | 225 x 200 | | |
| RRI082 | 250 x 160 | | |
| RRI071 | 250 x 200 | | |
| RRI500 | 250 x 225 | | |
| RRI083 | 280 x 225 | | |
| RRI073 | 315 x 200 | | |
| RRI074 | 315 x 225 | | |
| RRI072 | 315 x 250 | | |
| RRI085 | 315 x 280 | | |

## REDUCED TEE 90°

| Code | Ø | P. | PFA |
|---|---|---|---|
| RTI066 | 20x16x20 | 30 | 16 |
| RTI067 | 25x16x25 | 45 | |
| RTI068 | 25x20x25 | 10 | |
| RTI060 | 32x20x32 | | |
| RTI061 | 32x25x32 | | |
| RTI062 | 40x20x40 | | |
| RTI063 | 40x25x40 | | |
| RTI064 | 40x32x40 | | |
| RTI065 | 50x20x50 | 1 | |
| RTI207 | 50x25x50 | | |
| RTI069 | 50x32x50 | | |
| RTI070 | 50x40x50 | | |
| RTI071 | 63x20x63 | | |
| RTI212 | 63x25x63 | | |
| RTI211 | 63x32x63 | | |
| RTI072 | 63x40x63 | | |
| RTI073 | 63x50x63 | | |
| RTI074 | 75x32x75 | | |
| RTI075 | 75x40x75 | | |
| RTI076 | 75x50x75 | | |
| RTI077 | 75x63x75 | | |
| RTI078 | 90x40x90 | | |
| RTI079 | 90x50x90 | | |
| RTI220 | 90x63x90 | | |
| RTI081 | 90x75x90 | | |
| RTI082 | 110x50x110 | | |
| RTI225 | 110x63x110 | | |
| RTI084 | 110x75x110 | | |
| RTI229 | 110x90x110 | | |
| RTI230 | 125x63x125 | | |
| RTI231 | 125x75x125 | | |
| RTI085 | 125x90x125 | | |
| RTI087 | 125x110x125 | | |
| RTI088 | 140x75x140 | | |
| RTI089 | 140x90x140 | | |
| RTI090 | 140x110x140 | | |
| RTI091 | 140x125x140 | | |
| RTI092 | 160x90x160 | | |
| RTI095 | 160x110x160 | | |
| RTI093 | 160x125x160 | | |
| RTI094 | 160x140x160 | | |
| RTI096 | 180x110x180 | | |
| RTI097 | 200x160x200 | | |
| RTI098 | 200x180x200 | | |
| RTI099 | 225x200x225 | | |
| RTI100 | 250x110x250 | | |
| RTI101 | 250x160x250 | | |
| RTI102 | 250x200x250 | | |
| RTI103 | 250x225x250 | | |
| RTI105 | 280x225x280 | | |
| RTI108 | 315x160x315 | | |
| RTI109 | 315x200x315 | | |
| RTI106 | 315x225x315 | | |
| RTI107 | 315x250x315 | | |

## REDUCED SOCKET

| Code | Ø | P. | PFA |
|---|---|---|---|
| RMR100 | 180x160 | 1 | 10 |
| RMR101 | 200x110 | | |
| RMR102 | 200x180 | | |
| RMR103 | 225x110 | | |
| RMR104 | 225x125 | | |
| RMR105 | 225x180 | | |
| RMR106 | 250x110 | | |
| RMR107 | 250x125 | | |
| RMR108 | 250x140 | | |
| RMR109 | 250x160 | | |
| RMR110 | 250x180 | | |
| RMR111 | 250x200 | | |
| RMR112 | 250x225 | | |
| RMR113 | 280x110 | | 6 |
| RMR114 | 280x125 | | |
| RMR115 | 280x140 | | |
| RMR116 | 280x160 | | |
| RMR117 | 280x180 | | |
| RMR118 | 280x200 | | |
| RMR119 | 280x225 | | |
| RMR120 | 280x250 | | |
| RMR121 | 315x160 | | |
| RMR122 | 315x180 | | |
| RMR123 | 315x200 | | |
| RMR124 | 315x225 | | |
| RMR125 | 315x250 | | |

## ADAPTOR AND STUB FLAT FACE

| Code | Ø | P. | PFA |
|---|---|---|---|
| RCL061 | 20 | 1 | 16 |
| RCL062 | 25 | | |
| RCL063 | 32 | | |
| RCL064 | 40 | | |
| RCL058 | 50 | | |
| RCL059 | 63 | | |
| RCL060 | 75 | | |
| RCL055 | 90 | | |
| RCL054 | 110 | | |
| RCL051 | 125 | | |
| RCL052 | 140 | | |
| RCL053 | 160 | | |
| RCL065 | 180 | | 10 |
| RCL050 | 200 | | |
| RCL056 | 225 | | |
| RCL057 | 250 | | |
| RCL067 | 280 | | |
| RCL066 | 315 | | |

## BLIND FLANGE

| Code | Ø | P. | PFA |
|---|---|---|---|
| RFG100 | 32 | 1 | 16 |
| RFG101 | 40 | | |
| RFG102 | 50 | | |
| RFG103 | 63 | | |
| RFG104 | 75 | | |
| RFG105 | 90 | | |
| RFG106 | 110 | | |
| RFG107 | 125 - DN110 | | |
| RFG118 | 140 | | |
| RFG119 | 160 | | |
| RFG120 | 200 | | 10 |
| RFG121 | 225 | | |

# FLANGES

## FIXED FEMALE THREADED FLANGE

| Code | Ø | P. | PFA |
|---|---|---|---|
| RFG049 | 1” | 1 | 16 |
| RFG050 | 1”¼ | | |
| RFG051 | 1”½ | | |
| RFG052 | 2” | | |
| RFG053 | 2”½ | | |
| RFG054 | 3” | | |
| RFG055 | 4” | | |

## FIXED MALE FLANGE FOR JOINING

| Code | Ø | P. | PFA |
|---|---|---|---|
| RFG130 | 20 | 1 | 16 |
| RFG131 | 25 | | |
| RFG132 | 32 | | |
| RFG133 | 40 | | |
| RFG134 | 50 | | |
| RFG135 | 63 | | |
| RFG136 | 75 | | |
| RFG137 | 90 | | |
| RFG138 | 110 | | |

## FIXED FEMALE FLANGE FOR JOINING

| Code | Ø | P. | PFA |
|---|---|---|---|
| RFG056 | 32 | 1 | 16 |
| RFG057 | 40 | | |
| RFG058 | 50 | | |
| RFG059 | 63 | | |
| RFG060 | 75 | | |
| RFG061 | 90 | | |
| RFG062 | 110 | | |

### LOOSE FLANGE

| Ø | Code | P. | PFA | Ø | Code | P. | PFA | Ø | Code | P. | PFA | Ø | Code | P. | PFA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 | RFG008 | 1 | 16 | 90 | RFG004 | 1 | 16 | 160 | RFG002 | 1 | 16 | 280 | RFG013 | 1 | 10 |
| 40 | RFG009 | | | 110 | RFG001 | | | 180 | RFG012 | | 10 | 315 | RFG030 | | |
| 50 | RFG011 | | | 125 - DN110 | RFG005 | | | 200 | RFG003 | | | | | | |
| 63 | RFG108 | | | 125 - DN125 | RFG014 | | | 225 | RFG007 | | | | | | |
| 75 | RFG109 | | | 140 | RFG006 | | | 250 | RFG010 | | | | | | |

## MOLDED THREADED FITTINGS

### SOCKET NIPPLE

| Ø | Code | P. | PFA |
|---|---|---|---|
| 20 x 16 x ⅜" | RMN008 | 1 | 16 |
| 25 x 20 x ½" | RMN009 | | |
| 32 x 25 x ¾" | RMN010 | | |
| 40 x 32 x 1" | RMN011 | | |
| 50 x 40 x 1"¼ | RMN012 | | |
| 63 x 50 x 1"½ | RMN005 | | |
| 75 x 63 x 2" | RMN001 | | |
| 90 x 75 x 2"½ | RMN003 | | |
| 110 x 90 x 3" | RMN004 | | |
| 125 x 110 x 4" | RMN002 | | |

### SOCKET

| Ø | Code | P. | PFA |
|---|---|---|---|
| 16 x ⅜" | RMP010 | 1 | 16 |
| 20 x ½" | RMP001 | | |
| 25 x ¾" | RMP002 | | |
| 32 x 1" | RMP003 | | |
| 40 x 1"¼ | RMP004 | | |
| 50 x 1"½ | RMP005 | | |
| 63 x 2" | RMP006 | | |
| 75 x 2"½ | RMP008 | | |
| 90 x 3" | RMP007 | | |
| 110 x 4" | RMP009 | | |

### UNION F/ THREADED F

| Ø | Code | P. | PFA |
|---|---|---|---|
| 16 x ⅜" | RBC101 | 1 | 16 |
| 20 x ½" | RBC102 | | |
| 25 x ¾" | RBC103 | | |
| 32 x 1" | RBC104 | | |
| 40 x 1"¼ | RBC105 | | |
| 50 x 1"½ | RBC106 | | |
| 63 x 2" | RBC107 | | |
| 75 x 2"½ | RBC108 | | |
| 90 x 3" | RBC109 | | |
| 110 x 4" | RBC110 | | |

### TEE 90°

| Ø | Code | P. | PFA |
|---|---|---|---|
| 16 x ⅜" x 16 | RTP011 | 1 | 16 |
| 20 x ½" x 20 | RTP010 | | |
| 25 x ¾" x 25 | RTP001 | | |
| 32 x 1" x 32 | RTP005 | | |
| 40 x 1"¼ x 40 | RTP006 | | |
| 50 x 1"½ x 50 | RTP007 | | |
| 63 x 2" x 63 | RTP008 | | |
| 75 x 2"½ x 75 | RTP003 | | |
| 90 x 3" x 90 | RTP002 | | |
| 110 x 4" x 110 | RTP004 | | |

### ADAPTOR

| Ø | Code | P. | PFA |
|---|---|---|---|
| 25 x 20 x ⅜" | RAD003 | 1 | 16 |
| 32 x 25 x ½" | RAD002 | | |
| 40 x 32 x ¾" | RAD004 | | |
| 50 x 40 x 1" | RAD166 | | |
| 63 x 50 x 1"¼ | RAD005 | | |
| 75 x 63 x 1"½ | RAD006 | | |
| 90 x 75 x 2" | RAD007 | | |
| 110 x 90 x 2"½ | RAD008 | | |
| 125 x 110 x 3" | RAD009 | | |

### UNION F/ THREADED M

| Ø | Code | P. | PFA |
|---|---|---|---|
| 25 x ¾" | RBC081 | 1 | 16 |
| 32 x 1" | RBC082 | | |
| 40 x 1"¼ | RBC083 | | |
| 50 x 1"½ | RBC084 | | |
| 63 x 2" | RBC085 | | |

### REDUCED TEE with female threaded outlet

| Ø | Code | P. | PFA |
|---|---|---|---|
| 25 x ½" x 25 | RTP020 | 1 | 16 |
| 32 x ½" x 32 | RTP021 | | |
| 32 x ¾" x 32 | RTP022 | | |
| 40 x ½" x 40 | RTP023 | | |
| 40 x ¾" x 40 | RTP024 | | |
| 40 x 1" x 40 | RTP025 | | |
| 50 x ¾" x 50 | RTP026 | | |
| 50 x 1" x 50 | RTP027 | | |
| 50 x 1"¼ x 50 | RTP028 | | |
| 63 x 1" x 63 | RTP029 | | |
| 63 x 1"¼ x 63 | RTP030 | | |
| 63 x 1"½ x 63 | RTP031 | | |

### ELBOW 90°

| Ø | Code | P. | PFA |
|---|---|---|---|
| 16 x ⅜" | RGO603 | 1 | 16 |
| 20 x ½" | RGO604 | | |
| 25 x ¾" | RGO126 | | |
| 32 x 1" | RGO120 | | |
| 40 x 1"¼ | RGO600 | | |
| 50 x 1"½ | RGO601 | | |
| 63 x 2" | RGO602 | | |
| 75 x 2"½ | RGO125 | | |
| 90 x 3" | RGO122 | | |
| 110 x 4" | RGO128 | | |

### ELBOW 45°

| Ø | Code | P. | PFA |
|---|---|---|---|
| 16 x ⅜" | RGO610 | 1 | 16 |
| 20 x ½" | RGO611 | | |
| 25 x ¾" | RGO612 | | |
| 32 x 1" | RGO613 | | |
| 40 x 1"¼ | RGO614 | | |
| 50 x 1"½ | RGO615 | | |
| 63 x 2" | RGO616 | | |

### SOCKET with INOX reinforcement

| Ø | Code | P. | PFA |
|---|---|---|---|
| 16 x ⅜" | RMP050 | 1 | 16 |
| 20 x ½" | RMP051 | | |
| 25 x ¾" | RMP052 | | |
| 32 x 1" | RMP053 | | |
| 40 x 1"¼ | RMP054 | | |
| 50 x 1"½ | RMP055 | | |
| 63 x 2" | RMP056 | | |

### REDUCER SOCKET M/F

| Ø | Code | P. | PFA |
|---|---|---|---|
| 25 x 20 x ½" | RAD199 | 1 | 16 |
| 32 x 25 x ¾" | RAD155 | | |
| 40 x 32 x 1" | RRI079 | | |
| 50 x 40 x 1"¼ | RAD206 | | |
| 63 x 50 x 1"½ | RAD154 | | |
| 75 x 63 x 2" | RRI084 | | |
| 90 x 75 x 2"½ | RAD197 | | |
| 110 x 90 x 3" | RAD210 | | |

### ADAPTOR M/F

| Ø | Code | P. | PFA |
|---|---|---|---|
| 25 x ¾" | RAD051 | 1 | 16 |
| 32 x 1" | RAD052 | | |
| 40 x 1"¼ | RAD053 | | |
| 50 x 1"½ | RAD054 | | |
| 63 x 2" | RAD055 | | |
| 75 x 2"½ | RAD056 | | |
| 90 x 3" | RAD057 | | |
| 110 x 4" | RAD058 | | |

### NIPPLE

| Ø | Code | P. | PFA |
|---|---|---|---|
| 16 x 12 x ⅜" | RNP157 | 1 | 16 |
| 20 x 16 x ½" | RNP158 | | |
| 25 x 20 x ¾" | RNP156 | | |
| 32 x 25 x 1" | RNP154 | | |
| 40 x 32 x 1"¼ | RAD165 | | |
| 50 x 40 x 1"½ | RAD011 | | |
| 63 x 50 x 2" | RNP153 | | |
| 75 x 63 x 2"½ | RNP155 | | |
| 90 x 75 x 3" | RNP150 | | |
| 110 x 90 x 4" | RNP151 | | |
| 125 x 110 x 5" | RNP152 | | |

### TEE 90° with INOX reinforcement

| Ø | Code | P. | PFA |
|---|---|---|---|
| 16 x ⅜" x 16 | RTP050 | 1 | 16 |
| 20 x ½" x 20 | RTP051 | | |
| 25 x ¾" x 25 | RTP052 | | |
| 32 x 1" x 32 | RTP053 | | |
| 40 x 1"¼ x 40 | RTP054 | | |
| 50 x 1"½ x 50 | RTP055 | | |
| 63 x 2" x 63 | RTP056 | | |

### ELBOW 90° with INOX reinforcement

| Ø | Code | P. | PFA |
|---|---|---|---|
| 16 x ⅜" | RGO280 | 1 | 16 |
| 20 x ½" | RGO281 | | |
| 25 x ¾" | RGO282 | | |
| 32 x 1" | RGO283 | | |
| 40 x 1"¼ | RGO284 | | |
| 50 x 1"½ | RGO285 | | |
| 63 x 2" | RGO286 | | |

### REDUCER M/F w INOX reinforcement

| Ø | Code | P. | PFA |
|---|---|---|---|
| 25 x 20 x ½" | RRD200 | 1 | 16 |
| 32 x 25 x ¾" | RRD201 | | |
| 40 x 32 x 1" | RRD202 | | |
| 50 x 40 x 1"¼ | RRD203 | | |
| 63 x 50 x 1"½ | RRD204 | | |

# THREADED FITTINGS

## SOCKET

| Code | Ø | P. | PFA |
|---|---|---|---|
| RMF011 | ⅜" | 1 | 16 |
| RMF001 | ½" | | |
| RMF002 | ¾" | | |
| RMF003 | 1" | | |
| RMF004 | 1"¼ | | |
| RMF005 | 1"½ | | |
| RMF006 | 2" | | |
| RMF007 | 2"½ | | |
| RMF010 | 3" | | |
| RMF009 | 4" | | |

## UNION

| Code | Ø | P. | PFA |
|---|---|---|---|
| RBC010 | ⅜" | 1 | 16 |
| RBC004 | ½" | | |
| RBC005 | ¾" | | |
| RBC001 | 1" | | |
| RBC002 | 1"¼ | | |
| RBC003 | 1"½ | | |
| RBC006 | 2" | | |
| RBC007 | 2"½ | | |
| RBC008 | 3" | | |
| RBC009 | 4" | | |

## HOSE ADAPTOR M/F

| Code | Ø | P. | PFA |
|---|---|---|---|
| RMG001 | ⅜"x½" | 1 | 16 |
| RMG002 | ½"x¾" | | |
| RMG003 | ¾"x1" | | |
| RMG004 | 1"x1"¼" | | |
| RMG005 | 1"¼"x1"½ | | |
| RMG006 | 1"½x2" | | |
| RMG007 | 1"½x2"½ | | |
| RMG008 | 2"x2"½ | | |
| RMG009 | 2"x3" | | |
| RMG010 | 2"½x3" | | |
| RMG011 | 2"½x4" | | |
| RMG012 | 3"x4" | | |

## TEE 90°

| Code | Ø | P. | PFA |
|---|---|---|---|
| RTE112 | ⅜" | 1 | 16 |
| RTE100 | ½" | | |
| RTE101 | ¾" | | |
| RTE102 | 1" | | |
| RTE106 | 1"¼ | | |
| RTE103 | 1"½ | | |
| RTE104 | 2" | | |
| RTE105 | 2"½ | | |
| RTE110 | 3" | | |
| RTE111 | 4" | | |

## ELBOW 45°

| Code | Ø | P. | PFA |
|---|---|---|---|
| RGO190 | ⅜" | 1 | 16 |
| RGO191 | ½" | | |
| RGO192 | ¾" | | |
| RGO193 | 1" | | |
| RGO194 | 1"¼ | | |
| RGO195 | 1"½ | | |
| RGO196 | 2" | | |

## ELBOW 90°

| Code | Ø | P. | PFA |
|---|---|---|---|
| RGO141 | ⅜" | 1 | 16 |
| RGO130 | ½" | | |
| RGO131 | ¾" | | |
| RGO132 | 1" | | |
| RGO133 | 1"¼ | | |
| RGO134 | 1"½ | | |
| RGO135 | 2" | | |
| RGO136 | 2"½ | | |
| RGO137 | 3" | | |
| RGO138 | 4" | | |

## NIPPLE

| Code | Ø | P. | PFA |
|---|---|---|---|
| RNP010 | ⅜" | 1 | 16 |
| RNP001 | ½" | | |
| RNP002 | ¾" | | |
| RNP003 | 1" | | |
| RNP004 | 1"¼ | | |
| RNP005 | 1"½ | | |
| RNP006 | 2" | | |
| RNP007 | 2"½ | | |
| RNP008 | 3" | | |
| RNP009 | 4" | | |

## PLUG

| Code | Ø | P. | PFA |
|---|---|---|---|
| RTA029 | ⅜" | 1 | 16 |
| RTA020 | ½" | | |
| RTA021 | ¾" | | |
| RTA022 | 1" | | |
| RTA023 | 1"¼ | | |
| RTA024 | 1"½ | | |
| RTA025 | 2" | | |
| RTA026 | 2"½ | | |
| RTA027 | 3" | | |
| RTA028 | 4" | | |

## REDUCER M/F

| Code | Ø | P. | PFA |
|---|---|---|---|
| RRD075 | ½"x⅜" | 1 | 16 |
| RRD100 | ¾"x⅜" | | |
| RRD070 | ¾"x½" | | |
| RRD074 | 1"x½" | | |
| RRD071 | 1"x¾" | | |
| RRD079 | 1"¼x½" | | |
| RRD088 | 1"¼x¾" | | |
| RRD076 | 1"¼x1" | | |
| RRD084 | 1"½x¾" | | |
| RRD077 | 1"½x1" | | |
| RRD073 | 1"½x1"¼ | | |
| RRD078 | 2"x1" | | |
| RRD087 | 2"x1"¼ | | |
| RRD085 | 2"x1"½ | | |
| RRD080 | 2"½x1"½ | | |
| RRD083 | 2"½x2" | | |
| RRD072 | 3"x2" | | |
| RRD081 | 3"x2"½ | | |
| RRD089 | 4"x2"½ | | |
| RRD082 | 4"x3" | | |

## REDUCER NIPPLE

| Code | Ø | P. | PFA |
|---|---|---|---|
| RNP070 | ½" x ⅜" | 1 | 16 |
| RNP071 | ¾" x ⅜" | | |
| RNP072 | ¾" x ½" | | |
| RNP073 | 1" x ½" | | |
| RNP074 | 1" x ¾" | | |
| RNP075 | 1"¼ x ¾" | | |
| RNP076 | 1"¼ x 1" | | |
| RNP077 | 1"½ x 1" | | |
| RNP078 | 1"½ x 1"¼ | | |
| RNP079 | 2" x 1"¼ | | |
| RNP080 | 2" x 1"½ | | |
| RNP081 | 2"½ x 1"½ | | |
| RNP082 | 2"½ x 2" | | |
| RNP087 | 3" x 2" | | |
| RNP084 | 3" x 2"½ | | |
| RNP085 | 4" x 2"½ | | |
| RNP086 | 4" x 3" | | |

## CAP

| Code | Ø | P. | PFA |
|---|---|---|---|
| RTA008 | ⅜" | 1 | 16 |
| RTA001 | ½" | | |
| RTA002 | ¾" | | |
| RTA003 | 1" | | |
| RTA004 | 1"¼ | | |
| RTA005 | 1"½ | | |
| RTA006 | 2" | | |
| RTA007 | 2"½ | | |
| RTA009 | 3" | | |
| RTA010 | 4" | | |

## HOSE THREADED

| Code | Ø | P. | PFA |
|---|---|---|---|
| RPG001 | ¼"x12 | 1 | N.A. |
| RPG002 | ⅜"x16 | | |
| RPG003 | ½"x20 | | |
| RPG004 | ¾"x25 | | |
| RPG005 | 1"x30 | | |
| RPG006 | 1"¼x40 | | |
| RPG007 | 1"½x50 | | |
| RPG008 | 2"x60 | | |
| RPG009 | 2"½x80 | | |

## HOSE ADAPTOR with threaded nut

| Code | Ø | P. | PFA |
|---|---|---|---|
| RPG200 | ¾"x16 | 1 | N.A. |
| RPG201 | 1"x20 | | |
| RPG202 | 1"¼x25 | | |
| RPG203 | 1"½x30 | | |
| RPG204 | 2"x40 | | |
| RPG205 | 2"¼x50 | | |
| RPG206 | 2"¾x60 | | |

## SPARE PARTS

### O-RING FOR ITEM

| Code | Ø |
|---|---|
| ROR050 | 20 |
| ROR051 | 25 |
| ROR052 | 32 |
| ROR053 | 40 |
| ROR054 | 50 |
| ROR055 | 63 |
| ROR056 | 75 |
| ROR057 | 90 |
| ROR058 | 110 |
| ROR059 | 125 |
| ROR060 | 140 |
| ROR061 | 160 |
| ROR062 | 200 |
| ROR063 | 225 |

### SEAL

| Code | Ø | P. |
|---|---|---|
| RGN041 | 20 | 1 |
| RGN040 | 25 | |
| RGN002 | 32 | |
| RGN003 | 40 | |
| RGN004 | 50 | |
| RGN006 | 63 | |
| RGN007 | 75 | |
| RGN052 | 90 | |
| RGN050 | 110 | |
| RGN001 | 125 | |
| RGN051 | 140 | |
| RGN005 | 160 | |
| RGN008 | 180 | |
| RGN055 | 200 | |
| RGN009 | 225 | |
| RGN012 | 250 | |
| RGN010 | 280 | |
| RGN059 | 315 | |

### BUSHING BONDING

| Code | Ø | P. | PFA |
|---|---|---|---|
| RBC510 | 16 | 1 | 16 |
| RBC511 | 20 | | |
| RBC512 | 25 | | |
| RBC513 | 32 | | |
| RBC514 | 40 | | |
| RBC515 | 50 | | |
| RBC516 | 63 | | |
| RBC517 | 75 | | |
| RBC518 | 90 | | |
| RBC519 | 110 | | |

### BUSHING THREADED

| Code | Ø | P. | PFA |
|---|---|---|---|
| RBC520 | ⅜" | 1 | 16 |
| RBC521 | ½" | | |
| RBC522 | ¾" | | |
| RBC523 | 1" | | |
| RBC524 | 1"¼ | | |
| RBC525 | 1"½ | | |
| RBC526 | 2" | | |
| RBC527 | 2"½ | | |
| RBC528 | 3" | | |
| RBC529 | 4" | | |

### BUSHING FOR ADAPTOR

| Code | Ø | P. | PFA |
|---|---|---|---|
| RBC530 | 16 | 1 | 16 |
| RBC531 | 20 | | |
| RBC532 | 25 | | |
| RBC533 | 32 | | |
| RBC534 | 40 | | |
| RBC535 | 50 | | |
| RBC536 | 63 | | |
| RBC537 | 75 | | |
| RBC538 | 90 | | |
| RBC539 | 110 | | |

### BUSHING FOR THREADED ADAPTOR

| Code | Ø | P. | PFA |
|---|---|---|---|
| RBC540 | ⅜" | 1 | 16 |
| RBC541 | ½" | | |
| RBC542 | ¾" | | |
| RBC543 | 1" | | |
| RBC544 | 1"¼ | | |
| RBC545 | 1"½ | | |
| RBC546 | 2" | | |
| RBC547 | 2"½ | | |
| RBC548 | 3" | | |
| RBC549 | 4" | | |

### O-RING EPDM FOR UNIO

| Code | Ø | P. |
|---|---|---|
| ROR100 | 16 | 1 |
| ROR101 | 20 | |
| ROR102 | 25 | |
| ROR103 | 32 | |
| ROR104 | 40 | |
| ROR105 | 50 | |
| ROR106 | 63 | |
| ROR107 | 75 | |
| ROR108 | 90 | |
| ROR109 | 110 | |

### NUT

| Code | Ø | P. | PFA |
|---|---|---|---|
| RBC550 | ¾" | 1 | 16 |
| RBC551 | 1" | | |
| RBC552 | 1"¼ | | |
| RBC553 | 1"½ | | |
| RBC554 | 2" | | |
| RBC555 | 2"¼ | | |
| RBC556 | 2"¾ | | |
| RBC557 | 3" | | 10 |
| RBC558 | 4" | | |
| RBC559 | 5" | | |

## ACCESSORIES FOR PIPES INSTALLATION

A

B

C

D

E

F

G

H

I

L

| Code | Utilization | Product name | Figure | Description |
|---|---|---|---|---|
| MTF001 | For threaded fittings | Teflon belt for threading | A | mt. 12 x ½" height |
| MTF002 | | | B | mt. 15 x ¾" height |
| MTF003 | | Silicon belt for threading | C | mt. 15 x 14 mm |
| MTF050 | | Loctite 55 | D | teflon sealant thread for threading |
| MCL010 | For bonding PVC fittings | Solvent for PVC with brush | E | 250 ml |
| MCL011 | | | | 500 ml |
| MCL012 | | | | 1000 ml |
| MCL025 | | Solder adhesive for pipes and PVC TANGIT | F | 500 ml |
| MCL026 | | | | 1000 ml |
| MDT001 | | Cleaner for PVC | G | 1000 ml |
| MSV005 | For joints in rubber ring | Slide | H | 1000 ml |
| MVR185 | Warning tape | Blue for "Pipe water" | I | mt 200 x 20mm Height |
| MVR265 | | Yellow for "Pipe gas" | L | mt 200 x 20mm Height |

## ► ELECTROFUSION, TRANSITION, SWEEP BENDS FITTINGS

PEAD fittings for plastic material pipe systems.
For pressurized fluid ducts reserved to water distribution.
For pressurized fluid duct reserved to industrial applications.
For buried burner gas ducts.
For non pressurized drainages.
Flanges and their junctions – circular flanges uses for pipes, valves, fittings and accessories designed using PFA.
Metal-polyethylene hybrid junctions for burner gas ducts, water and pressurized fluids.
Fittings suitable for drinking water and food liquids convoy according to the directives of Ministry of Health: C.M.…

| TECHNICAL DATA | |
|---|---|
| Material | High density polyethylene PE100 |
| Colour | Black |
| Density | > 0,930 Kg/cm$^2$ |
| Fluidity index | MFI 190° - 5Kg = 0,3 -1,3 g /10min |
| Chemical resistance | ISO TR 7474 |
| Expansion coefficient | Mm/m °C = 0,2 / 0,13 |
| Working temperature | 20° ÷ 60° C |

## ELECTROFUSION FITTINGS

### COUPLER

| Code | Ø mm | PFA | Pack |
|---|---|---|---|
| ABGE001 | 20 | 25 | 100 |
| ABGE002 | 25 | | 50 |
| ABGE003 | 32 | | |
| ABGE004 | 40 | | 16 |
| ABGE005 | 50 | | 24 |
| ABGE006 | 63 | | 15 |
| ABGE007 | 75 | | 10 |
| ABGE008 | 90 | | 8 |
| ABGE009 | 110 | | 4 |
| ABGE010 | 125 | | 6 |
| ABGE011 | 140 | | 4 |
| ABGE012 | 160 | | |
| ABGE013 | 180 | | 7 |
| ABGE014 | 200 | | 6 |
| ABGE015 | 225 | | 5 |
| ABGE016 | 250 | | 1 |
| ABGE018 | 280 | | |
| ABGE017 | 315 | | |

### GAS STOP

| Code | | Ø mm | Pack |
|---|---|---|---|
| Red Series 0,15 bar | Yellow Series 1 bar | | |
| AGSE001 | AGSE004 | 32 | 8 |
| AGSE002 | AGSE005 | 50 | 1 |
| AGSE003 | AGSE006 | 63 | 8 |

### REDUCED COUPLER

| Code | Ø mm | PFA | Pack |
|---|---|---|---|
| AMRE001 | 25 x 20 | 16 | 35 |
| AMRE003 | 32 x 25 | | 50 |
| AMRE024 | 40 x 25 | | 40 |
| AMRE004 | 40 x 32 | | 30 |
| AMRE027 | 50 x 32 | | 25 |
| AMRE006 | 50 x 40 | | 20 |
| AMRE007 | 63 x 32 | | 18 |
| AMRE008 | 63 x 40 | | 14 |
| AMRE009 | 63 x 50 | | 12 |
| AMRE011 | 75 x 50 | | |
| AMRE010 | 75 x 63 | | |
| AMRE029 | 90 x 50 | | 10 |
| AMRE012 | 90 x 63 | | 7 |
| AMRE013 | 110 x 63 | | 12 |
| AMRE014 | 110 x 90 | | |
| AMRE030 | 125 x 63 | | 8 |
| AMRE015 | 125 x 90 | | |
| AMRE016 | 125 x 110 | | 6 |
| AMRE031 | 160 x 90 | | 4 |
| AMRE018 | 160 x 110 | | |
| AMRE022 | 225 x 160 | | 2 |

### COLLAR WITH FEMALE THREADED

| Code | Ø mm | PFA | Pack |
|---|---|---|---|
| ACLE564 | 110 x 2” | 16 | 1 |
| ACLE570 | 125 x 2” | | |
| ACLE572 | 140 x 2” | | |
| ACLE136 | 160 x 2” | | |
| ACLE575 | 180 x 2” | | |
| ACLE576 | 200 x 2” | | |
| ACLE577 | 225 x 2” | | |

# FITTINGS

## PLUG

| Code | Ø mm | PFA | Pack |
|---|---|---|---|
| ATAE050 | 20 | 16 | 50 |
| ATAE051 | 25 | | 40 |
| ATAE052 | 32 | | 60 |
| RTAE053 | 40 | | 30 |
| ATAE054 | 50 | | 12 |
| ATAE055 | 63 | | 15 |
| ATAE056 | 75 | | 10 |
| ATAE057 | 90 | | 12 |
| ATAE058 | 110 | | 8 |
| ATAE059 | 125 | | 6 |
| ATAE060 | 140 | | 4 |
| ATAE061 | 160 | | |
| ATAE062 | 180 | | 3 |
| ATAE063 | 200 | | 4 |
| ATAE064 | 225 | | 2 |
| ATAE065 | 250 | | 3 |
| ATAE066 | 280 | | 1 |
| ATAE067 | 315 | | 2 |

## SIMPLE COLLAR

| Code | Ø mm | PFA | Pack |
|---|---|---|---|
| ACLE040 | 50 x 32 | 16 | 1 |
| ACLE004 | 63 x 20 | | |
| ACLE005 | 63 x 25 | | |
| ACLE010 | 63 x 32 | | |
| ACLE011 | 63 x 40 | | |
| ACLE014 | 75 x 32 | | |
| ACLE015 | 75 x 40 | | |
| ACLE016 | 75 x 50 | | |
| ACLE017 | 75 x 63 | | |
| ACLE025 | 90 x 20 | | |
| ACLE026 | 90 x 25 | | |
| ACLE018 | 90 x 32 | | |
| ACLE019 | 90 x 40 | | |
| ACLE020 | 90 x 50 | | |
| ACLE021 | 90 x 63 | | |
| ACLE030 | 110 x 32 | | |
| ACLE023 | 110 x 40 | | |
| ACLE031 | 110 x 50 | | |
| ACLE022 | 110 x 63 | | |
| ACLE033 | 125 x 32 | | |
| ACLE034 | 125 x 40 | | |
| ACLE028 | 125 x 50 | | |
| ACPE024 | 125 x 63 | | |
| ACPE017 | 125 x 90 | | |
| ACLE035 | 140 x 32 | | |
| ACLE036 | 140 x 40 | | |
| ACLE037 | 140 x 50 | | |
| ACLE007 | 140 x 63 | | |
| ACLE038 | 160 x 32 | | |
| ACLE511 | 160 x 63 | | |
| ACPE019 | 160 x 90 | | |
| ACLE042 | 180 x 32 | | |
| ACLE045 | 180 x 63 | | |
| ACLE050 | 200 x 32 | | |
| ACLE046 | 200 x 63 | | |
| ACLE051 | 225 x 32 | | |
| ACLE052 | 225 x 63 | | |
| ACLE054 | 250 x 32 | | |
| ACLE048 | 250 x 63 | | |
| ACLE055 | 280 x 32 | | |
| ACLE056 | 280 x 63 | | |
| ACLE059 | 315 x 32 | | |
| ACLE060 | 315 x 63 | | |

## SFERIC VALVE

| Code | Ø mm | PFA | Pack |
|---|---|---|---|
| AVSE001 | 20 | 16 | 1 |
| AVSE002 | 25 | | |
| AVSE003 | 32 | | |
| AVSE004 | 40 | | |
| AVSE005 | 50 | | |
| AVSE006 | 63 | | |
| AVSE007 | 75 | | |
| AVSE008 | 90 | | |
| AVSE009 | 110 | | |
| AVSE010 | 125 | | |
| AVSE011 | 160 | | |
| AVSE012 | 180 | | |
| AVSE013 | 200 | | |
| AVSE014 | 225 | | |

## PERFORATOR COLLAR

| Code | Ø mm | PFA | Pack |
|---|---|---|---|
| ACPE100 | 40 x 20 | 16 | 1 |
| ACPE101 | 40 x 32 | | |
| ACPE102 | 63 x 20 | | |
| ACPE103 | 63 x 32 | | |
| ACPE104 | 63 x 40 | | |
| ACPE106 | 75 x 32 | | |
| ACPE107 | 75 x 40 | | |
| ACPE108 | 90 x 32 | | |
| ACPE109 | 90 x 63 | | |
| ACPE110 | 110 x 32 | | |
| ACPE111 | 110 x 40 | | |
| ACPE112 | 110 x 63 | | |
| ACPE113 | 125 x 32 | | |
| ACPE114 | 125 x 63 | | |
| ACPE115 | 140 x 32 | | |
| ACPE116 | 140 x 63 | | |
| ACPE117 | 160 x 20 | | |
| ACPE118 | 160 x 32 | | |
| ACPE119 | 160 x 40 | | |
| ACPE120 | 160 x 63 | | |
| ACPE121 | 200 x 20 | | |
| ACPE122 | 200 x 32 | | |
| ACPE123 | 200 x 40 | | |
| ACPE124 | 200 x 63 | | |
| ACPE125 | 225 x 32 | | |
| ACPE126 | 225 x 63 | | |

## ELBOW 45°

| Code | Ø mm | PFA | Pack |
|---|---|---|---|
| AGOE029 | 20 | 16 | 50 |
| AGOE030 | 25 | | |
| AGOE031 | 32 | | 15 |
| AGOE032 | 40 | | 20 |
| AGOE033 | 50 | | 18 |
| AGOE018 | 63 | | 12 |
| AGOE019 | 75 | | 6 |
| AGOE020 | 90 | | 9 |
| AGOE021 | 110 | | 5 |
| AGOE022 | 125 | | |
| AGOE024 | 160 | | 2 |
| AGOE025 | 180 | | |
| AGOE026 | 200 | | 1 |
| AGOE027 | 225 | | |

## TEE 90°

| Code | Ø mm | PFA | Pack |
|---|---|---|---|
| ATEE049 | 20 | 16 | 50 |
| ATEE050 | 25 | | 40 |
| ATEE052 | 32 | | 25 |
| ATEE053 | 40 | | 18 |
| ATEE054 | 50 | | 12 |
| ATEE055 | 63 | | |
| ATEE056 | 75 | | 8 |
| ATEE057 | 90 | | 5 |
| ATEE058 | 110 | | 3 |
| ATEE059 | 125 | | 2 |
| ATEE061 | 160 | | |
| ATEE062 | 180 | | 1 |
| ATEE064 | 225 | | |

## COLLAR WITH VALVE

| Code | Ø mm | PFA | Pack |
|---|---|---|---|
| ACVE001 | 63 x 32 | 16 | 1 |
| ACVE002 | 90 x 32 | | |
| ACVE003 | 110 x 63 | | |
| ACVE004 | 125 x 63 | | |
| ACVE005 | 140 x 63 | | |
| ACVE006 | 160 x 63 | | |
| ACVE007 | 180 x 63 | | |
| ACVE008 | 200 x 63 | | |
| ACVE009 | 225 x 63 | | |

## ELBOW 90°

| Code | Ø mm | PFA | Pack |
|---|---|---|---|
| AGOE001 | 20 | 16 | 50 |
| AGOE002 | 25 | | 30 |
| AGOE003 | 32 | | 25 |
| AGOE004 | 40 | | |
| AGOE005 | 50 | | 15 |
| AGOE006 | 63 | | 10 |
| AGOE007 | 75 | | 5 |
| AGOE008 | 90 | | 6 |
| AGOE009 | 110 | | 4 |
| AGOE010 | 125 | | 3 |
| AGOE012 | 160 | | |
| AGOE013 | 180 | | 1 |
| AGOE014 | 200 | | |
| AGOE015 | 225 | | |

# WELD FITTINGS

## TEE 90°

| Code SDR 17 PFA 10 | Code SDR 11 PFA 16 | Ø mm | Pack |
|---|---|---|---|
| ATEE032 | ATEE002 | 75 | 1 |
| ATEE012 | ATEE003 | 90 | |
| ATEE013 | ATEE004 | 110 | |
| ATEE014 | ATEE005 | 125 | |
| ATEE015 | ATEE006 | 140 | |
| ATEE016 | ATEE007 | 160 | |
| ATEE019 | ATEE010 | 225 | |

## REDUCER

| Code SDR 17 PFA 10 | Code SDR 11 PFA 16 | Ø mm | Pack |
|---|---|---|---|
| | ARDE046 | 63 x 20 | 1 |
| | ARDE047 | 63 x 32 | |
| | ARDE003 | 63 x 40 | |
| | ARDE004 | 63 x 50 | |
| ARDE054 | ARDE005 | 75 x 40 | |
| ARDE055 | ARDE006 | 75 x 50 | |
| ARDE056 | ARDE007 | 75 x 63 | |
| ARDE057 | ARDE008 | 90 x 50 | |
| ARDE058 | ARDE009 | 90 x 63 | |
| ARDE059 | ARDE010 | 90 x 75 | |
| ARDE060 | ARDE012 | 110 x 63 | |
| ARDE061 | ARDE013 | 110 x 75 | |
| ARDE062 | ARDE014 | 110 x 90 | |
| ARDE063 | ARDE015 | 125 x 63 | |
| ARDE064 | ARDE016 | 125 x 75 | |
| ARDE065 | ARDE048 | 125 x 90 | |
| ARDE066 | ARDE049 | 125 x 110 | |
| ARDE067 | ARDE050 | 140 x 75 | |
| ARDE068 | ARDE017 | 140 x 90 | |
| ARDE069 | ARDE018 | 140 x 110 | |
| ARDE070 | ARDE019 | 140 x 125 | |
| ARDE071 | ARDE020 | 160 x 90 | |
| ARDE072 | ARDE021 | 160 x 110 | |
| ARDE073 | ARDE022 | 160 x 125 | |
| ARDE074 | ARDE023 | 160 x 140 | |
| ARDE076 | ARDE024 | 180 x 125 | |
| ARDE075 | ARDE025 | 180 x 140 | |
| ARDE078 | ARDE026 | 180 x 160 | |
| ARDE079 | ARDE051 | 200 x 125 | |
| ARDE080 | ARDE027 | 200 x 140 | |
| ARDE103 | ARDE028 | 200 x 160 | |
| ARDE081 | ARDE029 | 200 x 180 | |
| ARDE082 | ARDE030 | 225 x 125 | |
| ARDE083 | ARDE031 | 225 x 140 | |
| ARDE084 | ARDE032 | 225 x 160 | |
| ARDE085 | ARDE104 | 225 x 180 | |
| ARDE086 | ARDE105 | 225 x 200 | |
| ARDE087 | ARDE033 | 250 x 160 | |
| ARDE088 | ARDE035 | 250 x 200 | |
| ARDE090 | ARDE037 | 280 x 250 | |
| ARDE091 | ARDE038 | 315 x 200 | |

## PLUG

| Code SDR 17 PFA 10 | Code SDR 11 PFA 16 | Ø mm | Pack |
|---|---|---|---|
| | ATAE021 | 63 | 1 |
| ATAE002 | ATAE022 | 75 | |
| ATAE003 | ATAE023 | 90 | |
| ATAE004 | ATAE024 | 110 | |
| ATAE005 | ATAE025 | 125 | |
| ATAE006 | ATAE660 | 140 | |
| ATAE007 | ATAE026 | 160 | |
| ATAE008 | ATAE027 | 180 | |
| ATAE009 | ATAE028 | 200 | |
| ATAE010 | ATAE029 | 225 | |
| ATAE011 | ATAE030 | 250 | |

## ELBOW 90°

| Code SDR 17 PFA 10 | Code SDR 11 PFA 16 | Ø mm | Pack |
|---|---|---|---|
| | AGOE093 | 32 | 1 |
| | AGOE095 | 50 | |
| AGOE119 | AGOE096 | 63 | |
| AGOE120 | AGOE097 | 75 | |
| AGOE112 | AGOE098 | 90 | |
| AGOE123 | AGOE103 | 110 | |
| AGOE820 | AGOE104 | 125 | |
| AGOE115 | AGOE105 | 140 | |
| AGOE124 | AGOE099 | 160 | |
| AGOE125 | AGOE100 | 180 | |
| AGOE126 | AGOE110 | 200 | |
| AGOE127 | AGOE101 | 225 | |
| AGOE128 | AGOE109 | 250 | |
| AGOE121 | AGOE102 | 280 | |
| AGOE122 | AGOE111 | 315 | |

## ELBOW 45°

| Code SDR 17 PFA 10 | Code SDR 11 PFA 16 | Ø mm | Pack |
|---|---|---|---|
| | AGOE155 | 63 | 1 |
| AGOE138 | AGOE156 | 75 | |
| AGOE139 | AGOE157 | 90 | |
| AGOE140 | AGOE158 | 110 | |
| AGOE141 | AGOE163 | 125 | |
| AGOE136 | AGOE130 | 140 | |
| AGOE142 | AGOE159 | 160 | |

## ADAPTOR

| Code SDR 17 PFA 10 | Code SDR 11 PFA 16 | Ø mm | Pack |
|---|---|---|---|
| | ACTE004 | 63 | 1 |
| ACTE024 | ACTE005 | 75 | |
| ACTE025 | ACTE006 | 90 | |
| ACTE026 | ACTE007 | 110 | |
| ACTE027 | ACTE008 | 125 | |
| ACTE028 | ACTE009 | 140 | |
| ACTE029 | ACTE010 | 160 | |
| ACTE030 | ACTE011 | 180 | |
| ACTE031 | ACTE012 | 200 | |
| ACTE032 | ACTE013 | 225 | |
| ACTE033 | ACTE014 | 250 | |
| ACTE034 | ACTE015 | 280 | |
| ACTE035 | ACTE016 | 315 | |
| ACTE036 | ACTE017 | 355 | |
| | ACTE594 | 400 | |

## REDUCER TEE

| Code SDR 17 PFA 10 | Code SDR 11 PFA 16 | Ø mm | Pack |
|---|---|---|---|
| ATRE053 | ATRE113 | 75 x 50 | 1 |
| ATRE054 | ATRE114 | 75 x 63 | |
| | ATRE115 | 90 x 50 | |
| ATRE056 | ATRE116 | 90 x 63 | |
| ATRE057 | ATRE117 | 90 x 75 | |
| | ATRE118 | 110 x 50 | |
| ATRE059 | ATRE119 | 110 x 63 | |
| ATRE060 | ATRE120 | 110 x 75 | |
| ATRE061 | ATRE121 | 110 x 90 | |
| ATRE062 | ATRE122 | 125 x 63 | |
| ATRE063 | ATRE123 | 125 x 75 | |
| ATRE064 | ATRE124 | 125 x 90 | |
| ATRE065 | ATRE125 | 125 x 110 | |
| ATRE066 | ATRE126 | 140 x 63 | |
| ATRE067 | ATRE127 | 140 x 75 | |
| ATRE068 | ATRE128 | 140 x 90 | |
| ATRE069 | ATRE129 | 140 x 110 | |
| ATRE070 | ATRE130 | 160 x 63 | |
| ATRE071 | ATRE131 | 160 x 75 | |
| ATRE072 | ATRE132 | 160 x 90 | |
| ATRE073 | ATRE133 | 160 x 110 | |
| ATRE074 | ATRE134 | 160 x 125 | |
| ATRE083 | ATRE143 | 225 x 75 | |
| ATRE084 | ATRE144 | 225 x 90 | |
| ATRE085 | ATRE145 | 225 x 110 | |
| ATRE086 | ATRE146 | 225 x 160 | |
| ATRE087 | ATRE147 | 225 x 180 | |

## TRANSITIONS FITTINGS

### JOINT PE/STEEL BEND

| Code SDR 11 PFA 16 | Ø mm | Pack |
|---|---|---|
| ARTE040 | 25 x ¾" | 1 |
| ARTE041 | 32 x 1" | |
| ARTE042 | 40 x 1"¼ | |
| ARTE043 | 50 x 1"½ | |
| ARTE044 | 63 x 2" | |

### JOINT PE/STEEL FEMALE SHORT

| Code SDR 11 PFA 16 | Ø mm | Pack |
|---|---|---|
| ABGE048 | 20 x ½" | 1 |
| ABGE049 | 25 x ¾" | |
| ABGE050 | 32 x 1" | |
| ABGE051 | 40 x 1"¼ | |
| ABGE052 | 50 x 1"½ | |
| ABGE056 | 63 x 2" | |

### JOINT PE/STEEL MALE

| Code SDR 11 PFA 16 | Ø mm | Pack |
|---|---|---|
| ARTE010 | 25 x ¾" | 30 |
| ARTE011 | 32 x 1" | 20 |
| ARTE012 | 40 x 1"¼ | 10 |
| ARTE013 | 50 x 1"½ | |
| ARTE014 | 63 x 2" | 7 |

### JOINT PE/STEEL MALE SHORT

| Code SDR 11 PFA 16 | Ø mm | Pack |
|---|---|---|
| ABGE060 | 20 x ½" | 1 |
| ABGE061 | 25 x ¾" | |
| ABGE062 | 32 x 1" | |
| ABGE063 | 40 x 1"¼ | |
| ABGE071 | 50 x 1"½ | |
| ABGE075 | 63 x 2" | |

### JOINT PE/STELEL GALVANIZED MALE

| Code SDR 11 PFA 16 | Ø mm | Pack |
|---|---|---|
| ARTE002 | 32 x 1" | 15 |
| ARTE003 | 40 x 1"¼ | 12 |
| ARTE004 | 50 x 1"½ | 8 |
| ARTE005 | 63 x 2" | 6 |
| ARTE006 | 75 x 2"½ | 4 |
| ARTE007 | 90 x 3" | 3 |
| ARTE008 | 110 x 4" | 2 |
| ARTE009 | 125 x 4" | |

### ADAPTOR PEAD THREADED FEMALE HDPE

| Code SDR 11 PFA 16 | Ø mm | Pack |
|---|---|---|
| ARTE045 | 20 x ½" | 1 |
| ARTE046 | 25 x ¾" | |
| ARTE047 | 32 x 1" | |
| ARTE048 | 40 x 1"¼ | |
| ARTE049 | 50 x 1"½ | |
| ARTE050 | 63 x 2" | |

### ADAPTOR PEAD THREADED MALE HDPE

| Code SDR 11 PFA 16 | Ø mm | Pack |
|---|---|---|
| ARTE051 | 20 x ½" | 1 |
| ARTE052 | 25 x ¾" | |
| ARTE053 | 32 x 1" | |
| ARTE054 | 40 x 1"¼ | |
| ARTE055 | 50 x 1"½ | |
| ARTE056 | 63 x 2" | |

### JOINT PE/STEEL MALE

| Code SDR 11 PFA 16 | Ø mm | Pack |
|---|---|---|
| ARTE015 | 25 x ¾" | 24 |
| ARTE016 | 32 x 1" | 15 |
| ARTE017 | 40 x 1"¼ | 12 |
| ARTE018 | 50 x 1"½ | 8 |
| ARTE019 | 63 x 2" | 6 |
| ARTE020 | 75 x 2"½ | 4 |
| ARTE021 | 90 x 3" | 3 |
| ARTE022 | 110 x 4" | 2 |
| ARTE023 | 125 x 4" | |

### JOINT PE/BRASS SHORT FEMALE

| Code SDR 11 PFA 16 | Ø mm | Pack |
|---|---|---|
| ABGE090 | 20 x ½" | 1 |
| ABGE091 | 25 x ¾" | |
| ABGE092 | 32 x 1" | |
| ABGE093 | 40 x 1"¼ | |
| ABGE094 | 50 x 1"½ | |
| ABGE095 | 63 x 2" | |
| ABGE096 | 75 x 2"½ | |
| ABGE097 | 90 x 3" | |
| ABGE098 | 110 x 4" | |

### JOINT PE/BRASS SHORT MALE

| Code SDR 11 PFA 16 | Ø mm | Pack |
|---|---|---|
| ABGE080 | 20 x ½" | 1 |
| ABGE081 | 25 x ¾" | |
| ABGE082 | 32 x 1" | |
| ABGE083 | 40 x 1"¼ | |
| ABGE084 | 50 x 1"½ | |
| ABGE085 | 63 x 2" | |
| ABGE086 | 75 x 2"½ | |
| ABGE087 | 90 x 3" | |

## ▶ CAST IRON FITTINGS

Threaded fitting made of malleable cast iron ideal for the transportation of all kind of fluids. Material gets coated with zinc by hot dipping according to UNE 37501-88 norms (DIN 2444/ISO 1460). Fittings are threaded according to DIN 2999-259 (ISO 7/1-228) norms.

NIPPLE

| Ø | ½" | ¾" | 1" | 1"¼ | 1"½ | 2" | 2"½ | 3" | 4" |
|---|---|---|---|---|---|---|---|---|---|
| Code | FNZ002 | FNZ001 | FNZ003 | FNZ004 | FNZ005 | FNZ006 | FNZ007 | FNZ008 | FNZ010 |

COUPLING F/F

| Ø | ½" | ¾" | 1" | 1"¼ | 1"½ | 2" | 2"½ | 3" | 4" |
|---|---|---|---|---|---|---|---|---|---|
| Code | FMA001 | FMA002 | FMA003 | FMA004 | FMA005 | FMA006 | FMA007 | FMA008 | FMA009 |

ELBOW M/F

| Ø | ½" | ¾" | 1" | 1"¼ | 1"½ | 2" | 2"½ | 3" | 4" |
|---|---|---|---|---|---|---|---|---|---|
| Code | FGT001 | FGT002 | FGT003 | FGT004 | FGT005 | FGT006 | FGT007 | FGT008 | FGT009 |

ELBOW F/F

| Ø | ½" | ¾" | 1" | 1"¼ | 1"½ | 2" | 2"½ | 3" | 4" |
|---|---|---|---|---|---|---|---|---|---|
| Code | FGT020 | FGT021 | FGT022 | FGT023 | FGT024 | FGT025 | FGT026 | FGT027 | FGT028 |

CROSS

| Ø | ½" | ¾" | 1" | 1"¼ | 1"½ | 2" | 2"½ | 3" |
|---|---|---|---|---|---|---|---|---|
| Code | FCR001 | FCR002 | FCR003 | FCR004 | FCR005 | FCR006 | FCR007 | FCR008 |

TEE

| Ø | ½" | ¾" | 1" | 1"¼ | 1"½ | 2" | 2"½ | 3" | 4" |
|---|---|---|---|---|---|---|---|---|---|
| Code | FTZ009 | FTZ001 | FTZ002 | FTZ003 | FTZ004 | FTZ005 | FTZ006 | FTZ007 | FTZ010 |

STRAIGHT SWIVEL M/F

| Ø | ½" | ¾" | 1" | 1"¼ | 1"½ | 2" | 2"½ | 3" |
|---|---|---|---|---|---|---|---|---|
| Code | FBZ010 | FBZ011 | FBZ012 | FBZ014 | FBZ013 | FBZ015 | FBZ016 | FBZ017 |

CURVED SWIVEL M/F

| Ø | ½" | ¾" | 1" | 1"¼ | 1"½ | 2" | 2"½ | 3" |
|---|---|---|---|---|---|---|---|---|
| Code | FBZ060 | FBZ061 | FBZ062 | FBZ063 | FBZ064 | FBZ065 | FBZ066 | FBZ067 |

PLUG M

| Ø | ½" | ¾" | 1" | 1"¼ | 1"½ | 2" | 2"½ | 3" | 4" |
|---|---|---|---|---|---|---|---|---|---|
| Code | FTZ051 | FTZ050 | FTZ052 | FTZ053 | FTZ054 | FTZ055 | FTZ056 | FTZ057 | FTZ058 |

CAP F

| Ø | ½" | ¾" | 1" | 1"¼ | 1"½ | 2" | 2"½ | 3" | 4" |
|---|---|---|---|---|---|---|---|---|---|
| Code | FTZ078 | FTZ070 | FTZ071 | FTZ077 | FTZ072 | FTZ073 | FTZ074 | FTZ075 | FTZ079 |

EXTENTION cm. 20

| Ø | ¾" | 1" |
|---|---|---|
| Code | FPR010 | FPR011 |

REDUCER M/F

| Ø | ¾" x ½" | 1" x ½" | 1" x ¾" | 1"¼ x ½" | 1"¼ x ¾" | 1"¼ x 1" | 1"½ x ¾" |
|---|---|---|---|---|---|---|---|
| Code | FRD001 | FRD002 | FRD003 | FRD004 | FRD005 | FRD006 | FRD007 |
| Ø | 1"½ x 1" | 1"½ x 1"¼ | 2" x ¾" | 2" x 1" | 2" x 1"¼ | 2" x 1"½ | 2"½ x 1" |
| Code | FRD008 | FRD009 | FRD010 | FRD011 | FRD012 | FRD013 | FRD014 |
| Ø | 2"½ x 1"¼ | 2"½ x 1"½ | 2"½ x 2" | 3" x 2" | 3" x 2"½ | | |
| Code | FRD015 | FRD016 | FRD017 | FRD021 | FRD022 | | |

REDUCER COUPLING

| Ø | ¾" x ½" | 1" x ½" | 1" x ¾" | 1"¼ x 1" | 1"½ x 1" | 1"½ x 1"¼ | 2" x 1"¼ | 2" x 1"½ |
|---|---|---|---|---|---|---|---|---|
| Code | FMA020 | FMA021 | FMA022 | FMA024 | FMA025 | FMA028 | FMA026 | FMA027 |

REDUCER NIPPLE

| Ø | ½" x ⅜" | ¾" x ½" | 1" x ½" | 1" x ¾" | 1"¼ x ½" | 1"¼ x ¾" | 1"¼ x 1" |
|---|---|---|---|---|---|---|---|
| Code | FNZ037 | FNZ036 | FNZ039 | FNZ038 | FNZ040 | FNZ041 | FNZ015 |
| Ø | 1"½ x ¾" | 1"½ x 1" | 1"½ x 1"¼ | 2" x 1"¼ | 2" x 1"½ | | |
| Code | FNZ042 | FNZ016 | FNZ021 | FNZ022 | FNZ020 | | |

# FITTINGS

## ► YELLOW BRASS FITTINGS

Fittings built according to UNI EN 12165 UNI EN 12164 UNI EN 10226-1 UNI ISO 228-1 norms. They contain 1,8% of lead. They are obtained by a drawn bar or by hot press. Purposes: hydrosanitary systems, gas (methane) transport and GPL.

| | | Ø | | | Ø | | | Ø |
|---|---|---|---|---|---|---|---|---|
| | NIPPLE | ½" ÷ 2" | | COUPLING F/F | ½" ÷ 2" | | GOMITO M/F | ½" ÷ 2" |
| | GOMITO F/F | ½" ÷ 2" | | CROSS | ½" ÷ 1" | | TEE | ½" ÷ 2" |
| | STRAIGHT UNION M/F | ½" ÷ 2" | | BEND UNION M/F | ½" ÷ 2" | | CAP M | ½" ÷ 1" ¼ |
| | PLUG F | ½" ÷ 2" | | EXTENSION cm 20 | ¾" ÷ 1" | | REDUCER M/F | ½" x ⅜" ÷ 2" x 1"½ |
| | REDUCER COUPLING M/F | ½" x ⅜" ÷ 2" x 1"½ | | REDUCER NIPPLE | ½" x ⅜" ÷ 2" x 1"½ | | | |

## ► METAL FITTINGS

### SWIFT FITTINGS

| Code | Pic. | Type | Ø |
|---|---|---|---|
| FAR002 | A | Female quick connect fitting | ½" |
| FAR003 | | | ¾" |
| FAR004 | | | 1" |
| FAR005 | | | 1"¼ |
| FAR006 | | | 1"½ |
| FAR012 | B | Male quick connect fitting | ½" |
| FAR013 | | | ¾" |
| FAR014 | | | 1" |
| FAR015 | | | 1"¼ |
| FAR016 | | | 1"½ |
| FAR021 | C | Hose adaptor quick connector fitting | DN 13 |
| FAR022 | | | DN 15 |
| FAR029 | | | DN 18 |
| FAR023 | | | DN 20 |
| FAR026 | | | DN 25 |
| FAR027 | | | DN 32 |
| FAR028 | | | DN 38 |
| FAR031 | D | Quick connector plug | |
| FAR041 | E | F/M/M 3 ways fitting | |
| FAR050 | F | Quick connect 3 ways fitting | |
| FNG001 | | Quick fitting gask | |

A

B

C

D

E

F

### FLEXIBLE FITTINGS

**USEFUL PROPERTIES**

Rubber flexible hose, galvanized s/s or aluminium alloy overbraid . Due to its elasticity, doesn't transmit vibrations between the two connected offset points , even in awkward positions (a rigid hose could't work).

**TECHNICAL PROPERTIES**

- Connection size: 1"
- Length: 630 mm. - 680 mm.

| Code | Type | Length mm | Pack |
|---|---|---|---|
| RFO063 | RSF 630 | 630 | 1 |
| RFO068 | RSF 680 | 680 | |

## ► 3 PIECES NYLON FITTINGS

**TECHNICAL PROPERTIES**

Three pieces hose-rubber fittings with gas and polyamide metric threading

**MALE FITTING in 3 pieces conic housing with right hose-rubber**

**MALE ELBOW in 3 pieces conic housing with right hose-rubber**

**HOSE-RUBBER SOCKET in 3 pieces conic housing**

| Thread G" | Hose adaptor mm. | Fitting M | Elbow M | Socket H.A. |
|---|---|---|---|---|
| ¾" | 20 | RPO001 | RPO020 | |
| 1" | | | | RPO500 |
| | 25 | RPO008 | RPO023 | RPO501 |
| | 30 | | | RPO502 |
| | 32 | RPO015 | RPO032 | RPO507 |
| | 35 | | | RPO503 |
| | 40 | | | RPO504 |
| 1"¼ | 32 | RPO017 | RPO034 | |
| | 40 | RPO011 | RPO029 | |
| | 50 | RPO014 | RPO035 | RPO505 |
| 1"½ | 40 | RPO005 | RPO026 | |
| 2" | 50 | RPO006 | RPO027 | |
| | | RPO007 | RPO028 | |
| | 60 | RPO010 | | RPO506 |

**STRENGHTENED HOSE CLAMP SEE ON PAGE 133**

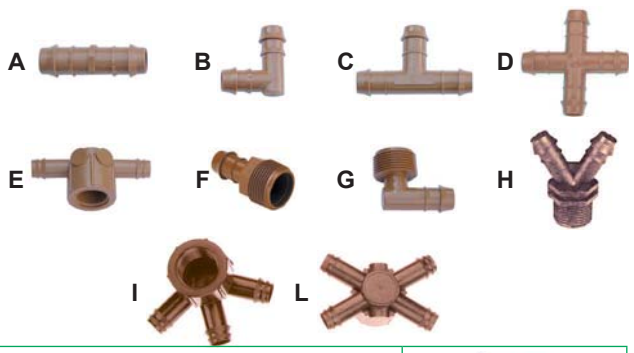
## ► FITTING FOR DRIPLINE AND PIPE PE

### BLACK FITTING FOR DRIPLINE AND PIPE P.E.

| Code | Type | Pic. | Ø mm | Pack |
|---|---|---|---|---|
| RMP802 | Safe coupling | A | 16 | 100 |
| RMP803 | | | 20 | |
| RMP100 | Coupling | B | 16 | |
| RMP101 | | | 20 | |
| RMP115 | Short coulpling | C | 16 x 20 | |
| RGO150 | Elbow | D | 16 | |
| RGO151 | | | 20 | |
| RTE050 | Tee 90° | E | 16 | |
| RTE051 | | | 20 | |
| RMP110 | Connection male threaded H.A. | F | 16 x ½" | |
| RMP111 | | | 20 x ½" | |
| RMP090 | Safe coupling | G | 16 | |
| RMP091 | | | 20 | |
| RMP093 | "T" 90° with safe | H | 16 | |
| RMP094 | | | 20 | |
| RMP097 | Starting from pe with safe | I | 16 x ¾ | |
| RMP099 | | | 20 x ¾ | |
| RMP804 | Starting from Pe with thread | L | ¾" | |
| RMP807 | End cap with ring for dripline | M | 16 | 1 |
| RTT200 | End cap plug for pipe and dripline | N | 16 | 25 |
| RTT201 | | | 20 | |

### BROWN FITTING FOR DRIPLINE

| Code | Type | Pic. | Ø mm | Pack |
|---|---|---|---|---|
| RMP105 | Coupling | A | 17 | 1 |
| RGO152 | Elbow | B | | |
| RTE055 | T 90° | C | | |
| RCR001 | Cross | D | | |
| RMP123 | Connector female threaded 2 outlets | E | 17 x ¾" | |
| RMP114 | Connector male threaded | F | | |
| RGO154 | Elbow with male connector threaded | G | | |
| RMP125 | Manifold 2 outlets | H | 17 x ¾" | 1 |
| RMP150 | Connector female threaded 3 outlets | I | | |
| RMP124 | Connector female thread 4 outlets | L | | |




**N.B. LAYFLAT FITTINGS - TAPE SEE ON PAGE 132**

## ► ACCESSORIES

### ACCESSORIES FOR DRIPLINE AND PIPE

A

B

C

D

E

F

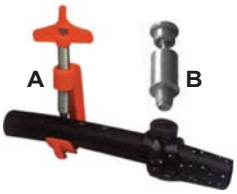
G

H

I

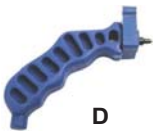
| Code | Type | Pic. | Ø mm | Pack |
|---|---|---|---|---|
| RMP127 | End cap for dripline | A | 16/17 | 1 |
| RMP128 | End cap for pipe | | 20 | |
| RTA066 | Locking ring for hole dripline | B | 16 | 500 |
| RGS003 | Netafim antidrop support hook for dripline | C | 16/17 | 1 |
| RFS050 | Reusable hose clamp for pipes | D | | 100 |
| RGS005 | Pipe stabiilzer | E | 16/17 | 100 |
| RGS200 | Support hook mm 80 | F | 16 | 1 |
| RGS201 | Support hook mm 150 | G | | |
| RGS002 | Support hook for pipe | H | | |
| RGS001 | | | 20 | |
| RGS010 | | | 25 | |
| RMP143 | Adaptor for micropipe | I | 16/17 x 5/3 | 100 |

## ► TOOLS FOR DRILLING, CUTTING AND INSERTING PIPES


A


B

C


D

E

F

Ø mm14
G

Ø mm19

H


I

L

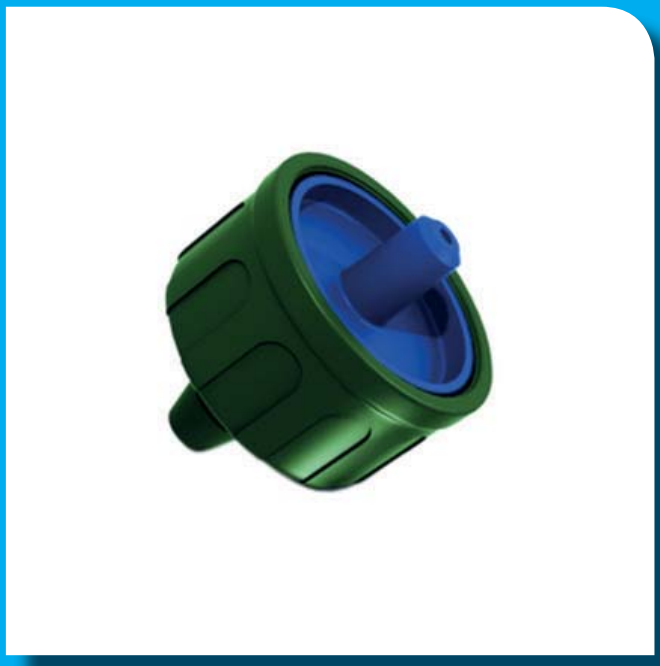
M

N

| Code | Type | | Pic. | Ø mm | Pack |
|---|---|---|---|---|---|
| **DRILL** | | | | | |
| OAF220 | Quick-Drill | S 7,5 | A | 7,5 | 1 |
| OAF221 | | S 11 | | 11,0 | |
| OAF030 | Pipe driller for saddle connection already installed Ø ½" - Ø ¾" | | B | | |
| OAF315 | Pipe driller MetalPuncher with plastic grip | | C | 3,0 | |
| OAF205 | Pipe driller with penetration tool | | D | | |
| OAF206 | | | | 4,0 | |
| OAF002 | Pipe driller with PE residual ejector | | E | 3,0 | |
| OAF007 | Plastic pipe driller pliers PE Ø 16/20 | | F | | |
| OAF008 | Plastic pipe driller pliers PE Ø 25/32 | | | | |
| OAF300 | Pipe driller for Layflat | PUNLF14 ORANGE | G | 14,0 | |
| OAF301 | | PUNLF19 BLUE | | 19,0 | |
| **CUT PIPE** | | | | | |
| OAF016 | Pliers Combo | Blade in PTFE | H + I | 40,0 | 1 |
| OAF017 | Pliers Basic | | H | | |
| OAF018 | Ratchet pipe cutter with automatic return | | L | | |
| **INSERT** | | | | | |
| OAF210 | Pliers for little pipe's insertion | | M | 5/3 | 1 |
| OAF211 | | | | 7/4 | |
| OAF310 | Black key for Layflat LFDRS fittings insertion" | | N | 7,0 | |
| OAF312 | | | | 10,0 | |

# C

# SPRINKLERS



## ► DRIPPERS AND SPRAYERS

# NON COMPENSATING DRIPPER

**Recommended filtration:** 120 mesh.

**TURBO:** emitter with a long path that leads to the emission hole placed on a barbed-removable plug • equipped with a clasp that can sustain the feeding tube • Nominal flow rate of 8 l/h (see table below report pressure range) • in connection Ø 6 mm - **Working pressure Recommended** 10 mca.

**SG:** labyrinth dripper, separable, characterized by an inner pad colored turbulent flow that determines the scope of the dripper, push-in fitting, wide range of courses • multifunctional output • **Working pressure Recommended** 10 m.c.a. • **Maximum pressure** 15 m.c.a.

| Pressure m.c.a. | Flow rate 8 l/h |
|---|---|
| 5 | 4,3 |
| 10 | 8,0 |
| 15 | 11,4 |
| 20 | 14,6 |
| 25 | 17,6 |

Pressure/real flow rate for Turbo drippers

**TURBO**

| Turbo | |
|---|---|
| Code | $Q_{nom}$ l/h |
| OGC650 | 8 |
| OGC651 | 16 |

| MAX LENGHT (MT) 0% SLOPE WITH OPERATING DRIPPER PRESSURE 1 BAR | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Type | Flow rate variance % | $Q_{nom}$ l/h | Ø turbo mm | | Spacing within drippers mt | | | | | | | | |
| | | | ØE | ØI | 0,50 | 0,75 | 1,00 | 1,25 | 1,50 | 1,75 | 2,00 | 2,25 | 2,50 |
| Turbo | 10 | 8 | 16 | 13,6 | 33 | 43 | 52 | 60 | 68 | 75 | 81 | 88 | 94 |
| | 15 | | | | 38 | 50 | 60 | 69 | 78 | 86 | 94 | 101 | 108 |

**SG**

| MAX LENGHT OF PIPE (RANGE OF FLOW RATE +-5%) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Ø pipe mm | | Spacing (m) | | | | | | | | |
| Code | Type | $Q_{nom}$ l/h | ØE | ØI | 0,3 | 0,4 | 0,5 | 0,6 | 0,8 | 1 | 1,25 | 1,5 | 2 |
| OGC030 | SG white | 3 | 16 | 13,6 | 54 | 65 | 75 | 84 | 102 | 118 | 135 | 153 | 184 |
| | | | 20 | 17,4 | 83 | 99 | 115 | 129 | 156 | 180 | 206 | 233 | 254 |
| OGC031 | SG black | 5 | 16 | 13,6 | 39 | 47 | 54 | 61 | 74 | 85 | 98 | 110 | 132 |
| | | | 20 | 17,4 | 59 | 71 | 83 | 93 | 112 | 128 | 150 | 168 | 200 |
| OGC032 | SG red | 8 | 16 | 13,6 | 29 | 34 | 40 | 44 | 54 | 62 | 71 | 81 | 97 |
| | | | 20 | 17,4 | 44 | 52 | 60 | 68 | 82 | 95 | 109 | 123 | 148 |
| OGC033 | SG blue | 15 | 16 | 13,6 | 19 | 23 | 27 | 30 | 36 | 41 | 48 | 53 | 64 |
| | | | 20 | 17,4 | 29 | 35 | 40 | 45 | 55 | 63 | 73 | 81 | 98 |
| | | | 25 | 21,6 | 42 | 51 | 58 | 66 | 78 | 91 | 105 | 119 | 142 |
| OGC034 | SG black | 20 | 16 | 13,6 | 16 | 19 | 22 | 25 | 30 | 34 | 39 | 44 | 53 |
| | | | 20 | 17,4 | 24 | 29 | 34 | 37 | 45 | 52 | 60 | 68 | 82 |
| | | | 25 | 21,6 | 35 | 42 | 48 | 54 | 66 | 76 | 88 | 98 | 118 |

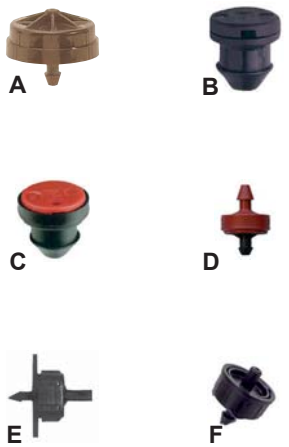
## SELF COMPENSATING DRIPPER

Made of resin, Cv less than 0.03, system with filtration of dripper. They can be **used with pipe PEbd PFA4** with diameter max 2 mm. **Filtration:** 120 mesh.

**MAX LENGHT OF PIPE (RANGE OF FLOW RATE +-5%)**

| Press. m.c.a. | Ø pipe Ø E | Ø pipe Ø I | Spacing (m) 0,25 | | | | 0,50 | | | | 0,75 | | | | 1,00 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 16 | 13,6 | 67 | 55 | 35 | 29 | 150 | 95 | 60 | 49 | 202 | 128 | 80 | 65 | 247 | 158 | 98 | 78 |
| | 20 | 17,4 | 142 | 91 | 59 | 47 | 239 | 153 | 97 | 76 | 318 | 203 | 128 | 99 | 387 | 248 | 155 | 120 |
| 25 | 16 | 13,6 | 100 | 64 | 40 | 34 | 173 | 110 | 69 | 56 | 233 | 149 | 92 | 74 | 286 | 182 | 113 | 90 |
| | 20 | 17,4 | 164 | 105 | 68 | 54 | 276 | 176 | 111 | 88 | 368 | 236 | 147 | 115 | 449 | 287 | 179 | 139 |
| 30 | 16 | 13,6 | 111 | 71 | 44 | 37 | 191 | 122 | 76 | 62 | 259 | 165 | 102 | 82 | 317 | 203 | 125 | 100 |
| | 20 | 17,4 | 182 | 116 | 75 | 60 | 306 | 195 | 123 | 97 | 409 | 261 | 163 | 128 | 498 | 318 | 198 | 154 |
| Flow rate l/h | | | 2 | 3 | 4 | 8 | 2 | 3 | 4 | 8 | 2 | 3 | 4 | 8 | 2 | 3 | 4 | 8 |

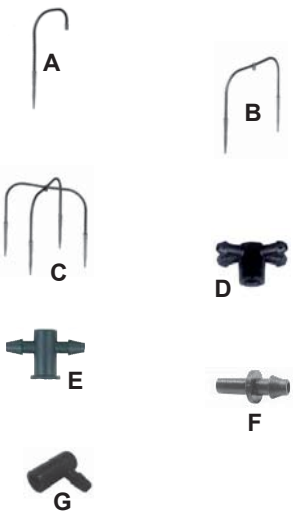
## SELF COMPENSATING DRIPPER




| Code | Type | Output | Color | Pic. | Variat. Q | Flow l/h | Range of compensa. m.c.a. |
|---|---|---|---|---|---|---|---|
| OGC057 | Pressure self compensating emitter | | | A | ± 5% | 2,00 | 5 ÷ 40 |
| OGC051 | | | | | | 4,00 | |
| OGC070 | | | | | | 8,00 | |
| OGC077 | | | | | | 24,00 | |
| OGC068 | Junior | | | D | ± 7,5% | 2,00 | 5 ÷ 40 |
| OGC069 | | | | | | 4,00 | |
| OGC087 | | | | | | 8,00 | |
| OGC110 | SG - Compensating with out protection | | | E | ± 8% | 4,50 | 8 ÷ 35 |
| OGC111 | | | | | | 8,00 | |
| OGC112 | | | | | | 15,00 | |
| OGC044 | Katif | Lateral | | B | ± 7,% | 3,75 | 8 ÷ 30 |
| OGC046 | | Superior | | C | | | |
| OGC047 | | | | - | | 8,00 | |
| OGC970 | ESG compensating with multifunctional output | | | F | ± 5% | 2,10 | 5 ÷ 40 |
| OGC971 | | | | | | 3,10 | |
| OGC972 | | | | | | 4,10 | |
| OGC973 | | | | | | 8,10 | |
| OGC974 | | | | | | 25,50 | |

## SELF COMPENSATING DRIPPER WITH MULTIFUNCTIONAL OUTPUT AND CNL

| Code | Type | Color | Variat. Q | Q l/h | Range of compensat. m.c.a. | Pic. |
|---|---|---|---|---|---|---|
| OGC980 | ESG CNL (CNL is no drainage system) | | ± 5% | 2,1 | 5 ÷ 40 CNL - open 4,5 close 2,0 | A |
| OGC979 | | | | 3,1 | | |
| OGC981 | | | | 4,1 | | |
| OGC982 | | | | 8,1 | | |




**ACCESSORIES MULTIFUNCTIONAL OUTLET**

| Code | Description | Dipdtick | Microtube | Output | Pic. |
|---|---|---|---|---|---|
| OSR305 | 60 cm output divider and 90° drip guide pins | without labyrinth | Black | 1 | A |
| OSR302 | | | White | | |
| OSR323 | | | | 2 | B |
| OSR307 | 60 cm output divider and straight drip guide pins (OGC074) | with labyrinth | Black● | 2 | |
| OSR303 | | | White | | |
| OSR308 | | | Black | 4 | C |
| OSR304 | | | White | | |
| OSR306 | 80 cm output divider and 90° drip guide pins | | Black | 1 | A |
| OSR307 | | | White | | |
| OSR309 | 80 cm output divider and straight drip guide pins (OGC074) | | Black | 2 | B |
| OSR312 | | | White | | |
| OSR310 | | | Black | 4 | C |
| OSR313 | | | White● | | |
| RMP135 | Multiexit divider fitting for micropipe | | | 4 | D |
| RMP151 | | | | 2 | E |
| RMP152 | Divider polyethylene pipe fitting | | | | F |
| RMP136 | 90° single exit fitting for micropipe | | | | G |

● On request

# SPRINKLERS

## DRIP POINT

Polypropylene emitter
**Pic. A** in line connection – **Pic. B** 90° connection with leading drip point – **Pic. C** free point.
**Pressure max. 12 m.c.a.** Suggested **filtering 120 mesh**

| | | Pressure m.c.a. | | | |
|---|---|---|---|---|---|
| | | Q l/h | | | |
| Code | Pic. | 5 | 7 | 10 | 12 |
| OGC074 | A | 1,65 | 1,94 | 2,30 | 2,51 |
| OGC053 | B | | | | |
| | | | | | |
| OGC088 | C | Color GREY | | | |

## PINS VARI JET

The pins vari jet can be connected to a hose through its micropipe.
10 pieces in each box.

| Code | Working angle | Pin mm |
|---|---|---|
| OGC213 | 360° | 310 |
| OGC216 | 360° | 200 |
| OGC214 | 180° | 310 |
| OGC217 | 180° | 200 |
| OGC212 | 90° | 310 |
| OGC215 | 90° | 310 |

| | | 360° 18 g | 90° | 180° |
|---|---|---|---|---|
| Press.atm | $Q_{lt/h}$ | $Ø_m$ | Rad.m | Rad.m |
| 0,5 | 41 | 0 ÷ 2,8 | 0 ÷ 1,8 | 0 ÷ 1,7 |
| 1,0 | 58 | 0 ÷ 4,0 | 0 ÷ 2,4 | 0 ÷ 2,4 |
| 1,5 | 72 | 0 ÷ 4,6 | 0 ÷ 2,8 | 0 ÷ 2,7 |
| 2,0 | 84 | 0 ÷ 5,0 | 0 ÷ 3,1 | 0 ÷ 3,0 |
| 2,5 | 95 | 0 ÷ 5,4 | 0 ÷ 3,4 | 0 ÷ 3,2 |

## JET COMPONENTS, WITHOUT ADJUSTABLE FLOW, TO ASSEMBLY

A complete kit includes 1 pins + 1 hose + 1 sprayer

| Code | Type | Features |
|---|---|---|
| OAT100 | Rigid pins | mm 200 |
| OAT101 | | mm 310 |
| OTB050 | Rigid extension with anchor couplings | mm 200 |
| OTB051 | | mm 300 |
| OTB052 | | mm 450 |
| OSR092 | Threaded adjustable sprinkler | Covering 360° |
| OSR091 | | Covering 180° |

## PRESSURE SELF COMPENSATING PINS SPRINKLERS

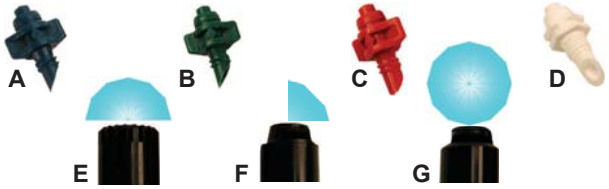
| Model | | Code | Working angle | | Press.atm | Q l/h | Ø wet |
|---|---|---|---|---|---|---|---|
| SHRUBBLER | | OGC201 | 360° | Open ± 22 shutter release | 1,0 | 33 | 0,37 |
| | | | | | 1,5 | 41 | 0,64 |
| | | | | | 2,0 | 49 | 0,92 |
| | | OGC202 | | Pressure self compensating | 1,5 | 37 | 0,35 |
| | | | | | 2,0 | 38 | 0,36 |
| | | | | | 2,5 | 40 | |
| | | | | | 3,0 | 42 | |
| | | OGC220 | 180° | Open ± 22 shutter release | 1,0 | 33 | 0,37 |
| | | | | | 1,5 | 41 | 0,50 |
| | | | | | 2,0 | 49 | 0,63 |
| MINIBUBBLER 360° | | OGC203 | 360° | Open ± 22 shutter release | 1,0 | 100 | 0,20 |
| | | | | | 1,5 | 119 | 0,33 |
| | | | | | 2,0 | 130 | 0,51 |
| | | OGC204 | | Pressure self compensating | 1,5 | 68 | 0,30 |
| | | | | | 2,0 | 75 | |
| | | | | | 2,5 | 78 | 0,40 |
| | | | | | 3,0 | 79 | |
| SPECTRUM 360° | | OGC207 | 360° | Open ± 22 shutter release | 1,0 | 64 | 2,80 |
| | | | | | 1,5 | 78 | 3,60 |
| | | | | | 2,0 | 90 | 4,00 |
| | | OGC210 | | Pressure self compensating | 1,5 | 35 | 1,00 |
| | | | | | 2,0 | 38 | 1,10 |
| | | | | | 2,5 | 39 | |
| | | | | | 3,0 | 41 | |

**Ray Jet Spray Tornado**

| | Description | l/h | Color | Code | Coverage | Pack |
|---|---|---|---|---|---|---|
| | Threaded 5 mm• | 25 | Black | OGC159 | 180° | 5.000 |
| | | 34 | Blue | OGC157 | | |
| | | 55 | Green | OGC156 | | |
| | | 70 | Red | OGC155 | | |
| | | 25 | Black | OGC135 | 360° | |
| | | 34 | Blue | OGC134 | | |
| | | 55 | Green b b | OGC133 | | |
| | | 70 | Red | OGC131 | | |

• On request male tapered union

## MINI SPRAYERS AND ACCESSORIES




| Code | Type | Pic. | Ø mm | Q l/h a 1 bar |
|---|---|---|---|---|
| OSR060 | MICROJET blue base | A | 1,0 | 33 |
| OSR061 | MICROJET green base | B | 1,3 | 54 |
| OSR062 | MICROJET red base | C | 1,5 | 75 |
| OSR065 | MICROJET white base | D | 2,3 | 163 |
| OSR080 | Head MICROJET 360° | E | | |
| OSR081 | Head MICROJET 180° | F | | |
| OSR082 | Head per MICROJET 90° | G | | |

## SPOT SPITTER SPRAYERS

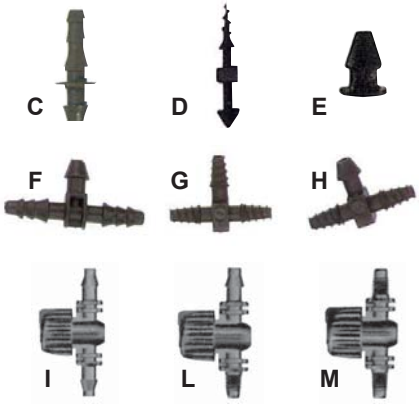
Easy maintenance removing the nebulizer strike to clean the groove.

| Code | Type | | Covering |
|---|---|---|---|
| OGC414 | Spot-Spitter | DS Lightgreen | 160° |
| OGC410 | | HS Grey Miniflow | 90° |

# ► ACCESSORIES, PIPES AND FITTINGS FOR SPRINKLERS

## ACCESSORIES FOR DRIPPER

| STAKES | | | | |
|---|---|---|---|---|
| Code | Type | Pic. | Ø mm | Pack |
| OAT011 | Open stake for pipe | A | 5 | 1.000 |
| OAT012 | Close stake for pipe | B | | |
| **INSERT FOR PIPE PEbd 16 ÷ 32 mm** | | | | |
| Code | Type | Pic. | Ø mm | Pack |
| RMP118 | Insert | C | 3 | 1.000 |
| RMP131 | Insert | D | | |
| RTA065 | Plug | E | | |
| **T INSERT FOR PIPE PEbd 16 ÷ 32 mm** | | | | |
| Code | Type | Pic. | Ø mm | Pack |
| RTE056 | Tee insert | F | 3 | 1.000 |
| RTE058 | Tee insert | G | | |
| RTE059 | Tee insert | H | | |
| **MINIVALVES** | | | | |
| Code | Type | Pic. | Ø mm | Pack |
| OGV010 | Minivalve mod. A | I | 3 | 50 |
| OGV011 | Minivalve mod. B | L | | |
| OGV012 | Minivalve mod. C | M | | |




## BD WHITE PIPE

| Code | Type | Ø mm | Coil● | |
|---|---|---|---|---|
| TPE1001 | PFA5 BD white pipe | 16 | 1 x 50 mt | |
| TPE1002 | | | 1 x 100 mt | |
| TPE1003 | | | 1 x 250 mt | |
| TPE1005 | | 20 | 1 x 100 mt | |
| TPE1011 | PFA3 BD white pipe | 16 | 1 x 500 mt | |
| TPE1012 | | 20 | 1 x 300 mt | |

● On demand other coil size

## MICROPIPE

| Code | Type | Utilization | Ø mm int/est | Coil | |
|---|---|---|---|---|---|
| OTB004 | PVC | Dripper | 3/5 | 1 x 200 mt | |
| OTB102 | PVC white/black | | | | |
| OTB080 | PVC | Sprinkling | 4/7 | | |
| OTB085 | PVC white/black | | | | |
| OTB100 | PE | Sprinkling max 130 l / h | | | |
| OTB086 | PE white/black | | | | |
| OTB083 | PE | Hydraulic control - sprinkling max 175 l / h | 5/8 | 1 x 150 mt | |
| OTB087 | PE white/black | | | 1 x 200 mt | |

## ▶ SPRINKLER

### SPRINKLER SI 5P BRONZE PART CIRCLE Ø½"M

**SI-5P WITH 2 NOZZLES**

| Code | Press. Kg/cm² | Ø nozzle mm | | | |
|---|---|---|---|---|---|
| | | 3,57• | | 3,97 | |
| | | Radius mt | Q l/m | Radius mt | Q l/m |
| AIR096 | 2,0 | 11,5 | 11,4 | 11,8 | 13,8 |
| | 2,5 | 11,7 | 13,2 | 12,0 | 15,6 |
| | 3,0 | 11,9 | 14,4 | 12,3 | 17,4 |
| | 3,5 | 12,2 | 15,0 | 12,5 | 19,2 |

• standard.

### SPRINKLER SI-228 PLASTIC PART CIRCLE Ø½" M

**SI-228 PART CIRCLE**

| Code | Press. Kg/cm² | Ø nozzle mm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 2,5 | | 3,0• | | 3,5 | | 4,0 | |
| | | Radius mt | Q l/m | Radius mt | Q l/m | Radius mt | Q l/m | Radius mt | Q l/m |
| OSR953 | 2,5 | 9,0 | 6,1 | 10,5 | 8,5 | 11,0 | 11,0 | 11,5 | 14,2 |
| | 3,0 | 9,5 | 6,8 | 11,0 | 9,2 | 11,5 | 12,3 | 12,0 | 15,8 |
| | 3,5 | 9,7 | 7,5 | 11,5 | 10,5 | 11,5 | 13,5 | 12,0 | 17,2 |
| | 4,0 | 10,2 | 8,0 | 12,0 | 12,0 | 12,5 | 15,5 | 13,0 | 19,7 |

• standard

### SPRINKLER SI 20P BRONZE PART CIRCLE Ø¾"M

**SI-20P WITH 2 NOZZLES**

| Code | Press. Kg/cm² | Ø nozzle mm | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3,96 - 2,38 | | 4,36 - 2,38 | | 4,76 - 3,17• | | 5,15 - 3,17 | | 5,55 - 3,17 | |
| | | Radius mt | Q l/m | Radius mt | Q l/m | Radius mt | Q l/m | Radius mt | Q l/m | Radius mt | Q l/m |
| AIR095 | 1,8 | 13,8 | 18,3 | 14,5 | 20,8 | 14,6 | 28,0 | 15,0 | 31,3 | 15,2 | 35,0 |
| | 2,2 | 14,2 | 20,0 | 14,8 | 23,0 | 15,0 | 30,8 | 15,4 | 34,7 | 15,6 | 38,7 |
| | 2,5 | 14,5 | 21,7 | 15,0 | 24,8 | 15,2 | 33,3 | 15,6 | 37,7 | 16,2 | 42,0 |
| | 3,3 | 14,8 | 24,5 | 15,4 | 28,2 | 15,8 | 38,2 | 16,2 | 42,8 | 17,0 | 48,0 |
| | 3,6 | 15,0 | 25,8 | 15,6 | 29,8 | 16,0 | 40,2 | 16,6 | 45,0 | 17,5 | 50,3 |

• standard.

### SPRINKLER SI-46F PP PART CIRCLE Ø ¾" M

**SI-46F WITH 2 NOZZLES**

| Code | Press. Kg/cm² | Ø nozzle mm | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 4,36 - 2,38 | | 4,76 - 2,38 | | 4,76 - 3,17• | | 5,15 - 3,17 | |
| | | Radius mt | Q l/m | Radius mt | Q l/m | Radius mt | Q l/m | Radius mt | Q l/m |
| AIR097 | 2,5 | 13,0 | 24,6 | 13,4 | 28,7 | 13,4 | 32,9 | 13,7 | 37,0 |
| | 3,0 | 13,7 | 28,3 | 14,0 | 32,9 | 14,0 | 38,2 | 14,3 | 42,2 |
| | 3,5 | 14,0 | 29,9 | 14,3 | 34,8 | 14,3 | 40,1 | 14,6 | 44,6 |
| | 4,0 | 14,3 | 32,5 | 14,6 | 37,8 | 14,6 | 43,5 | 14,9 | 48,4 |

• standard

## SPRINKLER SI 30P BRONZE PART CIRCLE Ø1”M

| SI-30P WITH 2 NOZZLES | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Ø nozzle mm | | | | | | | |
| | | 6,4 - 3,2 | | 7,1 - 3,2• | | 7,9 - 3,2 | | 8,7 - 3,2 | |
| Code | Press. Kg/cm² | Radius mt | Q l/m | Radius mt | Q l/m | Radius mt | Q l/m | Radius mt | Q l/m |
| AIR098 | 3,0 | 16,7 | 55,4 | 18,1 | 65,4 | 18,7 | 76,2 | 19,0 | 86,0 |
| | 4,0 | 17,7 | 63,8 | 19,5 | 75,8 | 20,1 | 87,0 | 20,8 | 98,4 |
| | 5,0 | 19,4 | 71,0 | 21,1 | 83,8 | 22,0 | 97,8 | 25,0 | 109,8 |
| | 6,0 | 20,5 | 78,0 | 22,1 | 96,0 | 23,1 | 112,2 | - | - |

• standard.

## SPRINKLER SI 40P BRONZE PART CIRCLE Ø1”¼

| SI-40P WITH 2 NOZZLES | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Ø nozzle mm | | | | | | | |
| | | 9,33 - 5,55 | | 10,32 - 5,55• | | 12,70 - 6,35 | | 15,87 - 6,35 | |
| Code | Press. Kg/cm² | Radius mt | Q l/m | Radius mt | Q l/m | Radius mt | Q l/m | Radius mt | Q l/m |
| AIR099 | 4,2 | 24,1 | 141,7 | 23,2 | 176,7 | 27,7 | 253,3 | 30,8 | 358,3 |
| | 4,9 | 23,5 | 151,7 | 23,5 | 190,0 | 28,7 | 275,0 | 32,6 | 390,0 |
| | 5,6 | 29,3 | 163,3 | 23,8 | 205,0 | 30,8 | 286,7 | 33,5 | 416,7 |
| | 6,3 | 26,5 | 178,3 | 24,1 | 220,0 | 31,4 | 316,7 | 34,1 | 443,3 |

• standard.

## SPRINKLERS SI-5-7F / SI-5-15F / SI-5-25F BRONZE FULL CIRCLE Ø ½” M

| SI-5-7F / SI-5-15F / SI-25-5F WITH 1 NOZZLES | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ø nozzle mm | | | | | | | | | | | | | | | |
| Press. | 2,38 | | | | 2,77 | | | | 3,17 | | | | 3,57 | | | |
| Kg/ | Ø mt | | | Q | Ø mt | | | Q | Ø mt | | | Q | Ø mt | | | Q |
| cm² | 7° | 15° | 25° | l/m | 7° | 15° | 25° | l/m | 7° | 15° | 25° | l/m | 7° | 15° | 25° | l/m |
| 0,1 | 15,9 | 20,1 | 20,7 | 4,8 | 16,5 | 21,1 | 21,0 | 7,2 | 16,5 | 21,7 | 21,3 | 9,0 | 17,1 | 21,9 | 21,6 | 11,8 |
| 2,4 | 17,1 | 20,2 | 21,9 | 5,2 | 17,7 | 21,2 | 22,0 | 7,7 | 17,7 | 21,9 | 22,2 | 9,5 | 18,3 | 22,3 | 22,5 | 13,1 |
| 2,8 | 17,7 | 20,6 | 22,5 | 5,6 | 18,3 | 21,2 | 23,0 | 8,5 | 18,3 | 22,3 | 23,2 | 10,3 | 18,9 | 22,4 | 23,5 | 14,1 |
| 3,1 | 18,3 | 20,7 | 23,0 | 5,9 | 18,9 | 21,7 | 23,5 | 9,0 | 18,9 | 22,3 | 23,8 | 10,5 | 19,5 | 22,9 | 24,0 | 15,2 |
| 3,5 | 19,5 | 21,1 | 23,5 | 6,3 | 19,5 | 21,9 | 23,8 | 9,2 | 20,1 | 22,9 | 24,0 | 11,6 | 20,1 | 23,0 | 24,4 | 15,6 |
| 3,8 | 20,1 | 21,3 | 23,8 | 6,5 | 20,1 | 22,4 | 24,0 | 9,8 | 20,7 | 23,0 | 24,4 | 12,1 | 20,7 | 23,6 | 24,7 | 16,0 |

| Code | Model | Trajec. |
|---|---|---|
| AIR110 | SI-5-7F | 7° |
| AIR111 | SI-5-15F | 15° |
| AIR112 | SI-5-25F | 25° |

## SPRINKLER SI -20 F BRONZE FULL CIRCLE Ø¾” M

| SI-20F WITH 2 NOZZLES | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | Ø nozzle mm | | | | | |
| | | 4,36 - 3,17 | | 4,76 - 3,17 | | 5,15 - 3,17• | |
| Code | Pressure Kg/cm² | Radius mt | Q l/m | Radius mt | Q l/m | Radius mt | Q l/m |
| AIR114 | 2,1 | 11,5 | 17,9 | 12,5 | 29,6 | 13,5 | 34,1 |
| | 2,5 | 13,0 | 23,5 | 13,5 | 32,3 | 14,5 | 36,8 |
| | 2,8 | 13,5 | 29,4 | 15,0 | 35,5 | 16,0 | 40,7 |
| | 3,2 | 14,0 | 32,8 | 15,5 | 43,2 | 16,5 | 43,2 |
| | 3,5 | 14,5 | 37,9 | 16,0 | 40,2 | 17,0 | 45,2 |

• standard

## SPRINKLER SI-25-33F BRONZE FULL CIRCLE Ø ¾" M

| SI-25-337F with 2 nozzles - Trajectory 33° | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Ø nozzle mm | | | | | | | |
| | | 5,55 - 3,17• | | 5,95 - 3,17 | | 6,35 - 3,17 | | 6,35 - 4,76 | |
| Code | Press. Kg/cm² | Radius mt | Q l/m | Radius mt | Q l/m | Radius mt | Q l/m | Radius mt | Q l/m |
| AIR115 | 2,0 | 14,1 | 37,3 | 16,1 | 39,5 | 16,5 | 44,2 | | |
| | 2,5 | 15,5 | 41,5 | 16,9 | 45,2 | 17,1 | 49,2 | 17,2 | 62,4 |
| | 3,0 | 16,7 | 45,5 | 17,7 | 49,6 | 17,5 | 54,6 | 17,9 | 67,7 |
| | 3,5 | 17,5 | 48,8 | 18,2 | 53,6 | 18,0 | 59,6 | 18,5 | 74,3 |
| | 4,0 | 18,1 | 52,4 | 18,5 | 58,9 | 18,7 | 64,3 | 19,5 | 80,2 |
| | 4,5 | 18,5 | 55,2 | 18,8 | 61,8 | 18,9 | 67,4 | 19,7 | 85,4 |
| | 5,0 | 18,8 | 58,6 | 19,1 | 65,0 | 19,2 | 71,2 | 19,8 | 89,6 |

• standard

## SPRINKLER SI-46F PP FULL CIRCLE Ø ¾" M

| SI-46F with 2 nozzles | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Ø nozzle mm | | | | | | | |
| | | 4,36 - 2,38 | | 4,76 - 2,38 | | 4,76 - 3,17• | | 5,15 - 3,17 | |
| Code | Press. Kg/ cm² | Radius mt | Q l/m | Radius mt | Q l/m | Radius mt | Q l/m | Radius mt | Q l/m |
| AIR097 | 2,5 | 13,0 | 24,6 | 13,4 | 28,7 | 13,4 | 32,9 | 13,7 | 37,0 |
| | 3,0 | 13,7 | 28,3 | 14,0 | 32,9 | 14,0 | 38,2 | 14,3 | 42,2 |
| | 3,5 | 14,0 | 29,9 | 14,3 | 34,8 | 14,3 | 40,1 | 14,6 | 44,6 |
| | 4,0 | 14,3 | 32,5 | 14,6 | 37,8 | 14,6 | 43,5 | 14,9 | 48,4 |

• standard

## SPRINKLER SI-30F BRONZE FULL CIRCLE Ø 1" M

| SI-30F with 2 nozzles | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Ø nozzle mm | | | | | | | | | |
| | | 5,55 - 4,46 | | 6,35 - 4,76 | | 7,14 - 4,76• | | 7,94 - 5,55 | | 8,73 - 5,55 | |
| Code | Press. Kg/cm² | Radius mt | Q l/m | Radius mt | Q l/m | Radius mt | Q l/m | Radius mt | Q l/m | Radius mt | Q l/m |
| AIR116 | 2,8 | 18,5 | 53,4 | 19,5 | 67,1 | 20,0 | 76,9 | 20,2 | 96,2 | 20,7 | 106,7 |
| | 3,2 | 18,7 | 57,5 | 20,0 | 71,2 | 20,5 | 81,8 | 20,7 | 102,7 | 21,5 | 116,6 |
| | 3,5 | 19,0 | 60,6 | 20,5 | 75,7 | 21,0 | 86,4 | 21,2 | 108,7 | 22,5 | 122,7 |
| | 3,9 | 19,5 | 63,2 | 20,7 | 79,9 | 21,5 | 90,9 | 22,0 | 114,4 | 23,0 | 128,8 |
| | 4,2 | 19,7 | 66,3 | 21,2 | 83,3 | 22,0 | 95,5 | 22,5 | 120,1 | 23,7 | 134,8 |

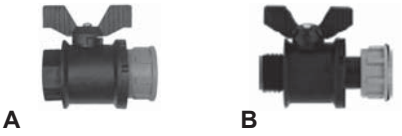
• standard

**N.B.: LITTLE COLUMNS FOR SPRINKLERS SEE ON PAGE 66**

# VALVES AND ACCESSORIES

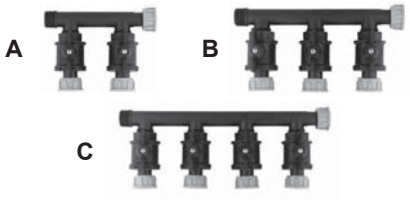
## ► MANUAL VALVES AND SHUTTERS

### SWIVEL BALL VALVES




| Code | Pic. | Ø | Connections | PFA | Pack |
|---|---|---|---|---|---|
| FVB002 | A | 1” | F/F | 16 | 1 |
| FVB005 | B | ¾” | M/F | | |
| FVB006 | | 1” | | | |
| FVB007 | | 1”½ | | | |
| FVB008 | | 2” | | | |

### MANIFOLD WITH BALL VALVES TAIL PIECES

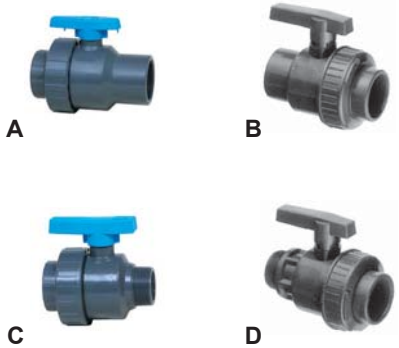



| Code | Pic. | Ø | Ball valves tail pieces ø 1” | Connections | PFA | Pack |
|---|---|---|---|---|---|---|
| FVB010 | A | 1”F x 2 x 1”M | 2 | M/F/F/F | 10 | 40 |
| FVB011 | B | 1”F x 3 x 1”M | 3 | M/F/F/F/F | | 20 |
| FVB012 | C | 1”F x 4 x 1”M | 4 | M/F/F/F/F/F | | 10 |
| FVB013 | | 1”F x 5 x 1”M | 5 | M/F/F/F/F/F/F | | |

### PLASTIC CONTROL THROTTLE VALVE

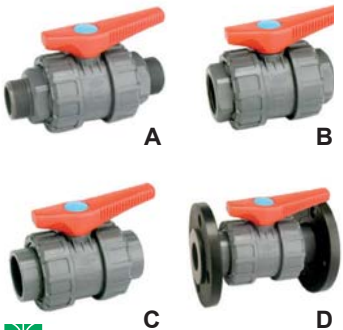
Easy grip handle for convenient operation. Inbuilt flow control indicator for easy understanding of % of throttling. Main spindle shaft made out of reinforced nylon for extra strength and more wear resistant during continuos operation.
Body made of glass reinforced engineering plastic. Handle made of Abs/PP O-Ring: NBR (nitrile butadiene rubber).

### SINGLE UNION PVC AND PE BALL SHUTTERS




| Ø | Connections | PFA | Pack | PVC Code | PVC Pic. | PP Code | PP Pic. |
|---|---|---|---|---|---|---|---|
| ½" | F/F | 16 | | FVI027 | A | | |
| ¾” | | | | FIV011 | | FVIA007 | B |
| 1” | | | | FVI025 | | FVIA008 | |
| 1”¼ | | | | FVI032 | | FVIA009 | |
| 1"½ | | | | FVI028 | | FVIA010 | |
| 2” | | | | FVI026 | | FVIA011 | |
| 2”½ | | 10 | | FVI029 | | | |
| 3” | | | | FVI024 | | | |
| ½" | M/F | 16 | | FVI031 | C | | |
| ¾” | | | | FVI018 | | FVIA020 | D |
| 1” | | | | FVI010 | | FVIA021 | |
| 1”¼ | | | | FVI043 | | FVIA022 | |
| 1"½ | | | | FVI044 | | FVIA023 | |
| 2” | | | | FVI040 | | FVIA024 | |

### BI-BACKNUT PVC BALL VALVES

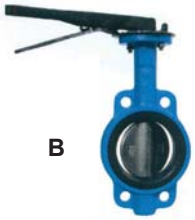



| Ø | PFA | Pack | Threaded codes Male | Pic. | Female | Pic. | To glue Code | Pic. | Flanged Code | Pic. |
|---|---|---|---|---|---|---|---|---|---|---|
| 20 - ½" | 16 | 1 | FVC220 | A | FVC230 | B | FVC240 | C | | |
| 25 - ¾” | | | FVC221 | | FVC231 | | FVC241 | | | |
| 32 - 1” | | | FVC222 | | FVC232 | | FVC242 | | | |
| 40 - 1”¼ | | | FVC223 | | FVC233 | | FVC243 | | | |
| 50 - 1"½ | | | FVC224 | | FVC234 | | FVC244 | | FVC215 | D |
| 63 - 2” | | | FVC225 | | FVC235 | | FVC245 | | FVC216 | |
| 75 - 2”½ | 10 | | FVC226 | | FVC236 | | FVC246 | | FVC217 | |
| 90 - 3” | 6 | | FVC227 | | | | FVC247 | | FVC218 | |

## THREE WAYS PVC BALL VALVES - PVC VALVES AND ADAPTOR

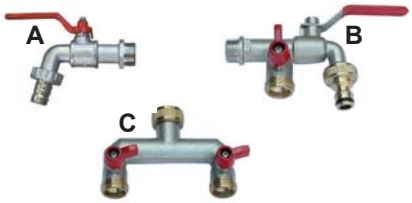
## CAST IRON LOW PROFILE AND BUTTERFLY PROFILE VALVES

A


B

| Ø | PFA | Pack | GG25 PFA16 rubber wedge low profile shutter | | PFA16 cast iron lens butterfly valve with lever | |
|---|---|---|---|---|---|---|
| | | | Code | Pic. | Code | Pic. |
| DN40 | 16 | 1 | FSP038 | A | FVF345 | B |
| DN50 | | | FSP039 | | FVF346 | |
| DN65 | | | FSP040 | | FVF347 | |
| DN80 | | | FSP041 | | FVF348 | |
| DN100 | | | FSP042 | | FVF350 | |
| DN125 | | | FSP044 | | FVF351 | |
| DN150 | | | FSP053 | | FVF352 | |
| DN200 | | | FSP046 | | FVF353 | |
| DN250 | | | FSP047 | | FVF354 | |
| DN300 | | | FSP011 | | FVF355 | |

## BALL WATER TAP




| | Pic. A | | | Pic. B | Pic. C |
|---|---|---|---|---|---|
| Ø | ½" | ¾" | 1" | ½" x ¾" | ¾" x ¾" x ¾" |
| Code | FRS001 | FRS002 | FRS003 | FRS120 | FRS125 |
| PFA | 15 | 15 | 12 | 10 | 10 |

## GALVANIZED BALL VALVES

| Ø | ½" | ¾" | 1" | 1"¼ | 1"½ | 2" | 2"½ | 3" | 4" |
|---|---|---|---|---|---|---|---|---|---|
| **Female / female** | | | | | | | | | |
| Cod | FSF100 | FSF101 | FSF102 | FSF103 | FSF104 | FSF105 | FSF108 | FSF106 | FSF107 |
| PFA | 50 | 40 | | 30 | | 25 | 18 | 16 | 14 |
| **Male / female** | | | | | | | | | |
| Cod | FSF120 | FSF121 | FSF122 | FSF125 | FSF123 | FSF124 | | | |
| PFA | 50 | 40 | | 30 | | 25 | | | |

## BRASS SHUTTER

| Ø | ½" | ¾" | 1" | 1"¼ | 1"½ | 2" | 2"½ | 3" | 4" |
|---|---|---|---|---|---|---|---|---|---|
| **Light series** | | | | | | | | | |
| Cod | FSV020 | FSV021 | FSV022 | FSV023 | FSV024 | FSV025 | FSV026 | FSV027 | FSV028 |
| PFA | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| **Heavy series** | | | | | | | | | |
| Cod | FSV001 | FSV002 | FSV003 | FSV004 | FSV005 | FSV006 | FSV007 | FSV008 | FSV010 |
| PFA | 20 | 20 | 20 | 20 | 20 | 20 | 16 | 16 | 16 |

## CHECK AND FOOT BRASS EUROPA VALVES

### USEFUL PROPERTIES

- Indispensable for hole-bore and tank suction.
- Brass check and foot valves (A)
- Filters for check and foot valves (B)

### TECHNICAL PROPERTIES

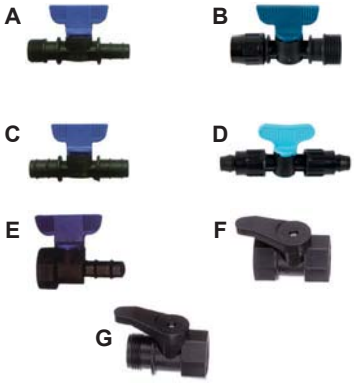
- Maximum operating pressure: PFA 40 bar at 20°
- ND: da ½" a 3"
- Fluid: water, air, hydrocarbon, acid, etc.

| | Europa valves | | | Filters for Europa valves | | |
|---|---|---|---|---|---|---|
| Ø | Code | Conn. | Pic. | Code | Conn. | Pic. |
| ½" | FVE001 | F/F | A | FFI001 | M | B |
| ¾" | FVE002 | | | FFI002 | | |
| 1" | FVE003 | | | FFI003 | | |
| 1"¼ | FVE004 | | | FFI004 | | |
| 1"½ | FVE005 | | | FFI005 | | |
| 2" | FVE006 | | | FFI006 | | |
| 2"½ | FVE007 | | | FFI007 | | |
| 3" | FVE008 | | | FFI011 | | |
| 4" | FVE009 | | | FFI012 | | |

# VALVES AND ACCESSORIES

## MINIVALVES

For dripline, threaded fittings and tape.




| Code | Type | Ø mm | Pic. | Pack |
|---|---|---|---|---|
| FRS085 | Offtake threaded M rubber | ¾" x 16 | A | 50 |
| FRS115 | | ¾" x 20 | | |
| FRS086 | Male threaded valve for hose adaptor with backnut | ½" x 16 | B | |
| FRS087 | | ¾" x 16 | | |
| FRS088 | | ½" x 20 | | |
| FRS089 | | ¾" x 20 | | |
| FRS008 | Offttake rubber/rubber | 16 x 16 | C | |
| FRS009 | | 20 x 20 | | |
| FRS080 | Offtake with nut | 16 x 16 | D | |
| FRS081 | | 20 x 20 | | |
| FRS017 | Offtake threaded F rubber | ¾" x 16 | E | |
| FRS018 | | ¾" x 20 | | |
| FRS015 | Offtake threaded F/F | ¾" x ¾" | F | |
| FRS016 | Offtake threaded M/F | ¾" x ¾" | G | |

## TAPE MINIVALVES

| Code | Description | Ø | Pack | |
|---|---|---|---|---|
| FRS020 | F threaded valve/tape | ¾" x 16 mm | 1-50 | |
| FRS095 | M threaded valve/tape | ¾" x 16 mm | | |
| FRS099 | | ¾" x 22 mm | | |
| FRS090 | Valvola cilindro tape Ø16 | PVC x Tape with optional rubber D2 | | |
| FRS094 | | PVC x Tape with optional rubber D3 | | |
| FRS096 | | PE x Tape | | |
| FRS100 | Tape derivation valve with Layflat pipe screw | 16 mm | | |
| FRS101 | | 22 mm | | |
| FRS091 | Backnut valve | 16 x 16 mm | | |
| FRS092 | | 20 x 20 mm | | |

## MINIVALVALVES FOR T-SAL

| Code | Description | Ø | Pack | |
|---|---|---|---|---|
| FRS023 | M threaded valve for T-SAL with floating ring | ½" x 16 | 1-50 | |
| FRS024 | | ¾" x 16 | | |
| FRS025 | Valve with floating ring T-SAL for PE with rubber | 16 | | |
| FRS027 | | 22 | | |

**DRILL PIPE SEE ON PAGE 132**

**HANSEN VALVES SEE ON PAGE 12**

## AIR BLEED

| Code | Ø | Pic. | Effect | Materials | $P_{max}$ bar |
|---|---|---|---|---|---|
| FVI321 | ¾" | A | Single | Reinforced polypropylene and polyamide (nylon) | 6,9 |
| FVI322 | 1" | B | | | |
| FVI362 | ¾" | C | Double | Polyamide - EPDM seals<br>- Floating expanded polystyrene | 16 |
| FVI363 | 1" | | | | |
| FVI370 | | | Triple | | |
| FVI366 | 2" | | Double | | |
| FVI396 | | | Triple | | |

Air bleeds can be of two types depending on the kind of work they can do.

The kinetic effect model performs basically two functions:
a) Ejecting air from pipes during the filling process;
b) Allowing the introduction of air in the system to avoid pipes crushing during the ducts emptying process.

The double effect (kinetic and automatic) model, besides performing the functions above explained, can eliminate possible air bubbles that may form inside the pipes during the activity of the system.

## ENDLINE VALVE

End line valve is useful to reduce dirty and it allows automatic cleaning when irrigation starts. To install in vertical position.

| Code | Pic. | Model | $Q_{max}$ | Pressure | Conn. |
|---|---|---|---|---|---|
| FVI704 | A | Air valve Rain Bird | 3,5 $m^3/h$ | 0,1 bar ÷ 10 bar | ½" M |
| OAC033 | B | Drainage brass valve | | | |

# ► ELECTROVALVES AND ACCESSORIES

## 203 SERIES ELECTROVALVES

LINE

ANGLE

**Standard materials:**

- 33% fiberglass nylon
- metallic parts and filter s/s AISI 304, spring s/s AISI 302
- rubber diaphgram
- EPDM o-ring

**Tolerable pressure between 0,78 and 9,81 bar.**

**Recommended working pressure between 0,98 and 6,86 bar.**

**Capacity between 150 and 1.350 l/m.**

**24 VAC solenoid** (two-way)**.**

| **Pressure drop 203 series electrovalves** | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø | | Code | Flow rate in $m^3/h$ | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 75 | 85 | 95 | 105 |
| 3" | Line | OVB300 | Bar | 0,14 | 0,17 | 0,22 | 0,30 | 0,38 | 0,44 | 0,49 | 0,67 | 0,86 | 1,06 | 1,31 | 1,55 |
| | Angle | OVB301 | | 0,12 | 0,14 | 0,19 | 0,26 | 0,32 | 0,35 | 0,39 | 0,50 | 0,67 | 0,84 | 1,11 | 1,29 |

## VALVE 200 SERIES

The 200 Series plastic control valves range from ¾" to 2" in size, in either globe or angle pattern. These control valves provide superior hydraulic performance, demonstrating state-of-the-art hydraulics and plastics technology.

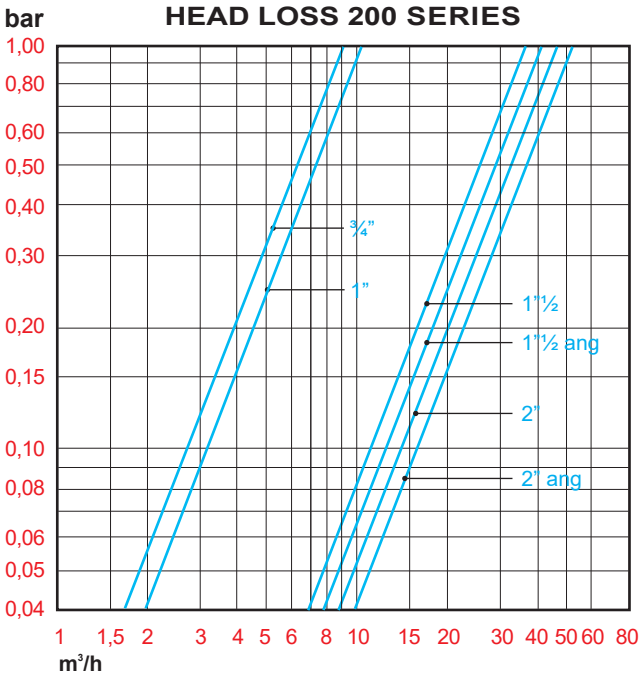
### FEATURES AND BENEFITS

- Spring Loaded Elastomeric.
- Self operated.
- Range of closing springs.
- Plastic Globe Hydro-Efficient Valve.
- Unobstructed flow path.
- Single moving part.
- High flow capacity.
- Highly durable, chemical and cavitation resistant.
- Flexible Balances Diaphragm & Seal.
- Fully opening.
- Secures drip-tight closing.
- User-Friendly Design.
- Simple in-line inspection.
- Working pressure between 0.70 – 10 atm.

**TECHNICAL DATA**

| | Code | Ø | Connection threaded F/F | Flow control | Function | Excecution | Solenoid | Dimension mm $L_{max}$ | Dimension mm H | Weight Kg• |
|---|---|---|---|---|---|---|---|---|---|---|
| | OVB202 | ¾" | Line | Yes | Open/ Close | Electric | 24 VAC | 110 | 115 | 0,35 |
| | OVB212 | | | | | | Bistable | | | |
| | OVB203 | 1" | | | | | 24 VAC | | | 0,33 |
| | OVB213 | | | | | | Bistable | | | |
| | OVB204 | 1"½ | | | | | 24 VAC | 160 | 180 | 1,00 |
| | OVB214 | | | | | | Bistable | | | |
| | OVB206 | | Angle | | | | 24 VAC | 125 | 190 | 0,95 |
| | OVB216 | | | | | | Bistable | | | |
| | OVB220 | | Line | | pressure | Hydraulics | | 160 | 180 | 1,00 |
| | OVB222 | | Angle | No | | | | 125 | 190 | 0,95 |
| | OVB205 | 2" | Line | Yes | Open/ Close | Electric | 24 VAC | 170 | 190 | 1,10 |
| | OVB215 | | | | | | Bistable | | | |
| | OVB207 | | Angle | | | | 24 VAC | 125 | 210 | 0,91 |
| | OVB217 | | | | | | Bistable | | | |
| | OVB221 | | Line | | pressure reducer | Hydraulics | | 170 | 190 | 1,10 |
| | OVB223 | | Angle | No | | | | 125 | 210 | 0,91 |

• Without manual flow control



130-55-X-M

## VALVE 100 SERIES

The 100 Series Hydraulic Control Landscape Valve is a hydraulically operated, diaphragm actuated control valve that opens and shuts in response to a pressure command.

### FEATURES AND BENEFITS

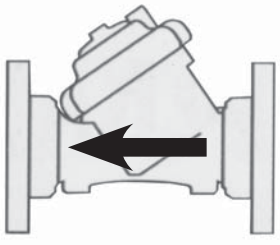
- Hydraulic Control Valve.
- Line pressure driven.
- Hydraulically controlled On/Off.
- Engineered Plastic Valve with Industrial Grade Design.
- Adaptable on-site to a wide range of end connection sizes and types.
- Articulated flange connections eliminate mechanical and hydraulic stresses.
- Highly durable, chemical and cavitation resistant.
- HYflow 'Y' Valve Body with "Look Through" Design.
- Ultra-high flow capacity - Low pressure loss.
- Unitized Flexible Super Travel (FST) Diaphragm and Guided Plug.
- Smooth closing.
- Requires low actuation pressure.
- Prevents diaphragm erosion and distortion.
- User-Friendly Design.
- Simple in-line inspection and service".
- Working pressure between 0.35 and 10 atm.

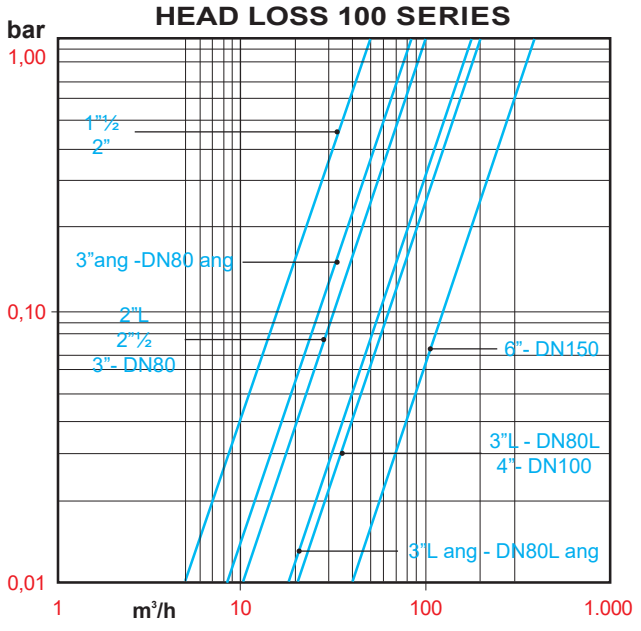
**100 SERIES THREADED**

| Model | | Date | | CODE | 1"½ | 2" | 2"L | 2"½ | 3" | 3"L |
|---|---|---|---|---|---|---|---|---|---|---|
| 105 | M | Basic valve with mechanical close | | | FERB003 | FERB004 | FERB005 | FERB006 | FERB007 | FERB008 |
| 110 | 3W-M | Solenoid 24 VAC 3 ways | | | FERB031 | FERB032 | FERB033 | FERB034 | FERB035 | FERB036 |
| | N-2W-M | Solenoid 24 VAC 2 ways | | | FERB025 | FERB026 | FERB027 | FERB028 | FERB029 | |
| | LS-X-M | Solenoid Latch 3 ways | | | FERB049 | FERB050 | FERB051 | FERB052 | FERB053 | FERB054 |
| | LS-2W-M | Solenoid Latch 2 ways | | | FERB043 | FERB044 | FERB045 | FERB046 | FERB047 | |
| 120 | 2W-M | Reducer pressure with mechanical close | 2 ways | | FERB061 | FERB062 | FERB063 | FERB064 | FERB065 | FERB066 |
| | X-MZ | | 3 ways - manual selector | | FERB073 | FERB074 | FERB075 | FERB076 | FERB077 | FERB078 |
| | B-MZ | | 2/3 ways for low pressure - pilot servo - manual selector of position | | FERB085 | FERB086 | FERB087 | FERB088 | FERB089 | FERB090 |
| | 50-X-MZ | | Hidraulic control 3 ways - manual selector of position | | FERB097 | FERB098 | FERB099 | FERB100 | FERB101 | FERB102 |
| | 55-2W-M | | Electric control 2 ways | | FERB109 | FERB110 | FERB111 | FERB112 | FERB113 | FERB114 |
| | 55-X-M | | Electric control 3 ways | | FERB121 | FERB122 | FERB123 | FERB124 | FERB125 | FERB126 |
| | 55-LS-XM | | Electrical bistable control 3 ways | | FERB133 | FERB134 | FERB135 | FERB136 | FERB137 | FERB138 |
| 123 | X-MZ | Reducer/ sustaining pressure | 3 ways - manual selector of position | | FERB145 | FERB146 | FERB147 | FERB148 | FERB149 | FERB150 |
| 130 | X-MZ | Pressure sustaining with mecha-nical close | 3 ways - manual selector of position | | FERB157 | FERB158 | FERB159 | FERB160 | FERB161 | FERB162 |
| | 55X-M | | Electric control 3 ways | | FERB169 | FERB170 | FERB171 | FERB172 | FERB173 | FERB174 |
| 13 | Q | Quick discharge of pressure with mechanical close | | | FERB181 | FERB182 | FERB183 | FERB184 | FERB185 | FERB186 |
| 150 | 60-M | Level control | | | FERB193 | FERB194 | FERB195 | FERB196 | FERB197 | FERB198 |
| | | | | L | 200 | | 230 | | 298 | |
| | | | Dimension mm | H | 156 | | 170 | | 180 | 240 |
| | | | | W | 97 | | 135 | | 190 | |

105-M

123-X-MZ





## 100 SERIES ANGLE THREADED

| | Model | Data | | | 3” | 3”L |
|---|---|---|---|---|---|---|
| 105 | M | Basic valve with mechanical lock | | CODE | FERB009 | FERB010 |
| 110 | 3W-M | Solenoid 24 VAC 3 ways | | | FERB037 | FERB038 |
| | LS-X-M | Solenoid Latch 3 ways | | | FERB055 | FERB056 |
| 120 | 2W-M | Reducer pressure with mechanical close | 2 ways | | FERB067 | FERB068 |
| | X-MZ | | 3 ways - manual selector | | FERB079 | FERB080 |
| | B-MZ | | 2/3 ways for low pressure - pilot servo - manual selector of position | | FERB091 | FERB092 |
| | 50-X-MZ | | Hidraulic control 3 ways - manual selector of position | | FERB103 | FERB104 |
| | 55-2W-M | | Electric control 2 ways | | FERB115 | FERB116 |
| | 55-X-M | | Electric control 3 ways | | FERB127 | FERB128 |
| | 55-LS-XM | | Electric control bistable 3 ways | | FERB139 | FERB140 |
| 123 | X-MZ | Reducer/sustaining pressure | 3 ways - manual selector of position | | FERB151 | FERB152 |
| 130 | X-MZ | Pressure sustaining with mechanical close | 3 ways - manual selector of position | | FERB163 | FERB164 |
| | 55X-M | | Electric control 3 ways | | FERB175 | FERB176 |
| 13 | Q | Quick discharge of pressure with mechanical lock | | | FERB187 | FERB188 |
| 150 | 60-M | Level control | | | FERB199 | FERB200 |
| | | | | L | 187 | 235 |
| | | | Dimension mm | H | 235 | 290 |
| | | | | W | 135 | 170 |

**120-X-MZ**

**13-Q-M**

**110-N-2W-M**

**150-60-M**

## 100 SERIES FLANGED

| | Model | Data | | | DN80 | DN80L | DN100 | DN150 |
|---|---|---|---|---|---|---|---|---|
| 105 | M | Basic valve with mechanical lock | | CODE | FERB011 | FERB012 | FERB013 | FERB014 |
| 110 | 3W-M | Solenoid 24 VAC 3 ways | | | FERB039 | FERB040 | FERB041 | FERB042 |
| | N-2W-M | Solenoid 24 VAC 2 ways | | | FERB030 | | | |
| | LS-X-M | Solenoid Latch 3 ways | | | FERB057 | FERB058 | FERB059 | FERB060 |
| | LS-2W-M | Solenoid Latch 2 ways | | | FERB048 | | | |
| 120 | 2W-M | Reducer pressure with mechanical close | 2 ways | | FERB069 | FERB070 | FERB071 | FERB072 |
| | X-MZ | | 3 ways - manual selector | | FERB081 | FERB082 | FERB083 | FERB084 |
| | B-MZ | | 2/3 ways for low pressure - pilot servo - manual selector of position | | FERB093 | FERB094 | FERB095 | FERB096 |
| | 50-X-MZ | | Hidraulic control 3 ways - manual selector of position | | FERB105 | FERB106 | FERB107 | FERB108 |
| | 55-2W-M | | Electric control 2 ways | | FERB117 | FERB118 | FERB119 | FERB120 |
| | 55-X-M | | Electric control 3 ways | | FERB129 | FERB130 | FERB131 | FERB132 |
| | 55-LS-XM | | Electric control bistable 3 ways | | FERB141 | FERB142 | FERB143 | FERB144 |
| 123 | X-MZ | Reducer/sustaining pressure | 3 ways - manual selector of position | | FERB153 | FERB154 | FERB155 | FERB156 |
| 130 | X-MZ | Pressure sustaining with mechanical close | 3 ways - manual selector of position | | FERB165 | FERB166 | FERB167 | FERB168 |
| | 55X-M | | Electric control 3 ways | | FERB177 | FERB178 | FERB179 | FERB180 |
| 13 | Q | Quick discharge of pressure with mechanical close | | | FERB189 | FERB190 | FERB191 | FERB192 |
| 150 | 60-M | Level control | | | FERB201 | FERB202 | FERB203 | FERB204 |
| | | | | L | 308 | 310 | 350 | 480 |
| | | | Dimension mm | H | 240 | 280 | 294 | 285 |
| | | | | W | 100 | 100 | 115 | 385 |

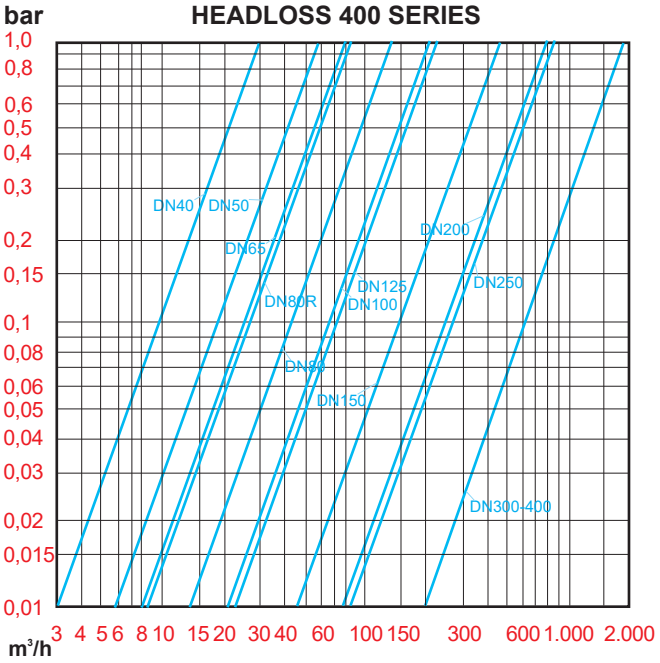
# CONTROL HYDRAULIC CAST IRON VALVES 400 SERIES

**Technical specifications:**

- Standard connections: **flanges**: ISO 7005-2 (PFA10 e 16) - **thread**: Rp ISO 7/1 (BSP.P) o NPT - **victaulic**: ANSI C606
- Functioning range: IR-400: **0,5 ÷ 16 bar**
- Temperature: water until **60°C**
- Standard materials: ■ **fusions**: cast iron EN 1561 - ball cast iron EN 1563 - brass ■ **plastic materials**: polyamide 6+30% GF ■ **elastomers**: NR to EN 681-1 ■ **paints**: powdered polyester electrostatic covering

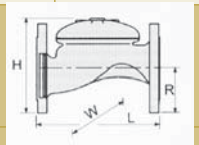
**Standard configuration**:

- Main valve: threaded and flanged – cast iron
- Nominal pressure: testo
- Main valve normally closed
- Threading: testo
- Paint: green polyester




**VALVES 400 SERIES - CONTROL FUNCTIONS**

| Model | Specifications | Code | Threaded | | | | | Flanged | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1"½ | 2" | 2"½ | 3"R | 3" | DN80 | DN100 | DN150 | DN200 |
| 405 | Basic valve | FERB | 400 | 401 | 403 | 404 | 405 | 407 | 409 | 411 | 412 |
| 405-KZ-C | Basic valve + 3 ways selector | FERB | 413 | 414 | 416 | 417 | 418 | 420 | 422 | 424 | |
| 410-KX | Basic valve + 3 ways solenoid 24V AC | FERB | 425 | 426 | 428 | | 430 | 432 | 434 | | |
| 410-LS-KX | Basic valve + 3 ways solenoid 9V DC | FERB | 440 | 441 | 443 | | 445 | 447 | 449 | | |
| 420-KXZ | Basic valve + pressing reducer + 3 ways selector | FERB | 455 | 456 | 458 | | 460 | 462 | 464 | | |
| 420-55-KX5 | Basic valve + solenoid 24V AC + pressing reducer + 3 ways selector | FERB | 482 | 483 | 485 | | 487 | 489 | 491 | | |
| 420-55-LS-KX | Basic valve + solenoid 9V DC + pressing reducer + 3 ways selector | FERB | 500 | 501 | 503 | | 505 | 507 | 509 | | |
| 423-KXZ | Basic valve + reducer + pressure sustaining | FERB | 515 | 516 | 518 | | 520 | 522 | 524 | | |
| 43Q-K | Basic valve + quick release | FERB | 530 | 531 | 533 | | 535 | 537 | 539 | | |
| 430-KXZ | Basic valve + pressure sustaining | FERB | 545 | 546 | 548 | | 550 | 552 | 554 | | |
| | Dimensions mm | L | 153 | 180 | 210 | 210 | 255 | 250 | 320 | 415 | 500 |
| | | H | 87 | 114 | 132 | 140 | 165 | 210 | 242 | 345 | 430 |
| | | W | 98 | 119 | 129 | 129 | 170 | 200 | 223 | 306 | 365 |
| | | R | 29 | 39 | 45 | 53 | 55 | 100 | 112 | 140 | 170 |
| | Weight Kg | | 2 | 4 | 5,7 | 5,8 | 13 | 19 | 28 | 68 | 125 |
| | Flow rate in m³/h at 1 bar headloss | | n.d. | 57 | 78 | n.d. | 136 | 136 | 204 | 458 | 781 |




For accessories contact Technical Department - Available Victaulic connection Ø DN50 - DN80 - DN100 - DN150

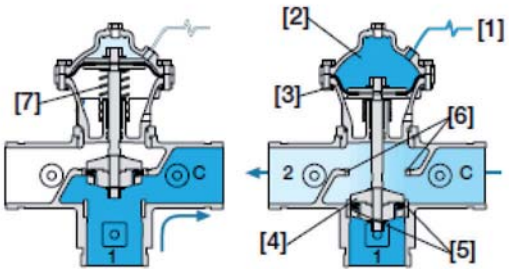
## BACKWASHING VALVES - 350 SERIES

The Series 350 is ideal for automatic backwashing of the filters. The simple design of these valves compact 3-way ensures smooth operation and extended without the need for assistance. The shutter closes a diaphragm seal the input stream of the filter, simultaneously opening the discharge. The dynamic seal ensures a complete seal is in input that in the exhaust. Thanks to the limited movement of the valve has a smooth change of flow direction and the non-water dispersion.

**Dimensions available**:

- Valves of glass fiber reinforced plastic 2” x 2” and 3” x 3” with dual-chamber actuator, available in configurations flow angle (A) and straight (S).
- Valves Metal 2” x 2”, 3” x 2”, 3 “x 3” with dual-chamber actuator, available in configurations to flow at an angle (A).
- Valves Metal 4” x 3”, and 4” x 4” with a single actuator, available in configuration to flow angle (A).

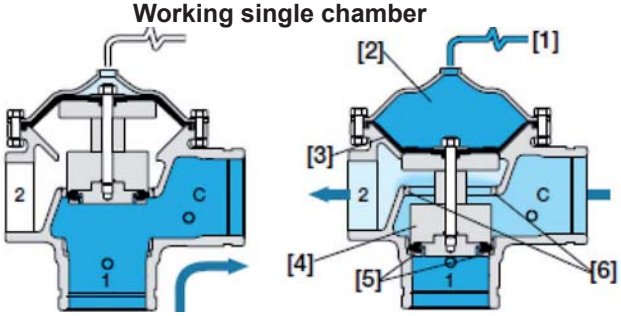
**Working double chamber**




Filtration Backwashing

Hydraulic [1], which pressurizes the upper chamber [2], press on the diaphragm [3] implements the shutter [4] towards the seat was held input [5], a total seal. inhibits steps flow from the exhaust port [6]. Download Room which together with the upper spring [7] push the actuator in the filtration position.

**Working single chamber**




Filtration Backwashing

Hydraulic [1], which pressurizes the chamber implementation [2], press on the diaphragm [3] implements the shutter [4] to the sealing seat of input [5], to total seal. inhibits Steps flow from the exhaust port [6]. When the valve closes, the shutter [7] blocks the exhaust port. By downloading the chamber pressure returns to the position of the shutter filtration.

| | Code | Model | With manual selector | With solenoid 24V AC | With solenoid 9V Latch |
|---|---|---|---|---|---|
| | **Backwashing valve, 2 x 2 plastic body** | | | | |
| | FERB350 | Straight flow and reverse IR 2” x 2” S-O-P-P threaded | FERB360 | FERB370 | FERB375 |
| | **Backwashing valve, 3 x 3 plastic body** | | | | |
| | FERB351 | Straight flow and reverse IR 2” x 2” S-O-P-P Victaulic | FERB361 | FERB371 | FERB376 |
| | **Backwashing valve, 3 x 2 metal body** | | | | |
| | FERB353 | Angle flow IR 3” x 2” – CC-A-I-P-VI-PG Victualic | FERB363 | FERB373 | FERB378 |
| | **Backwashing valve, 4 x 4 plastic body** | | | | |
| | FERB354 | Angle flow and reverse IR 4” x 4” A-P-V-VI-UC | FERB364 | FERB374 | FERB379 |

N. standard configuration with main valve normally open

# CAST IRON HYDRAULIC VALVES

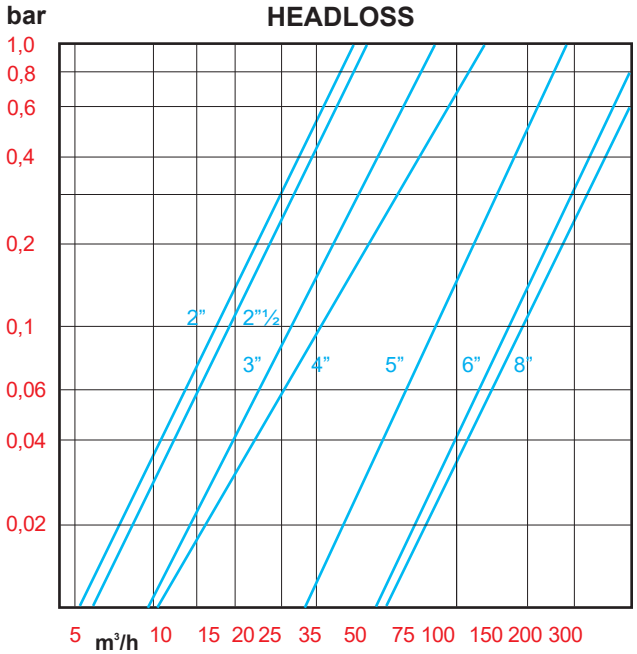
**Material:** Cast iron GG25 - **Coating:** Powder polyester - **Maximum working Pressure:** 16kg/cm$^2$ - **Diaphragm:** Neoprene or EPDM - **Threatedvalves:** BSP, (NPT under order) - **Diameter:** 1"½, 2", 2"½, 3" and 4" - **Flangedvalves:** DIN 2576, others under order - **Diameter:** DN80, DN100, DN125, DN150, DN200, DN250 and DN300.

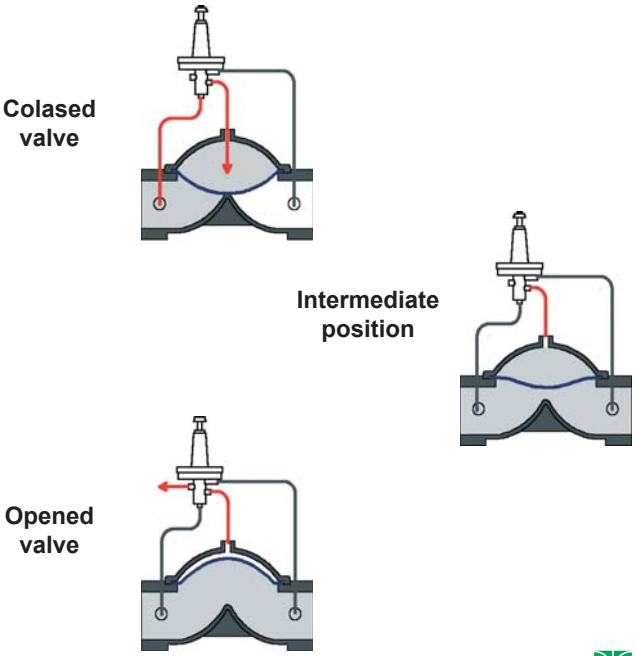
**BASIC VALVES - MINIMUN WORKING PRESSURE, SIZE AND WEIGHT**

| Code | Ø | Connectors | Diaphram press. min bar | | Dimension mm | | N° hole | Ø hole | Weight Kg |
|---|---|---|---|---|---|---|---|---|---|
| | | | Low P. | High P. | L | H | | | |
| FERV101 | 2" | Threaded | 0,3 | 0,5 | 165 | 110 | - | - | 3,2 |
| FERV102 | 2"½ | Threaded | 0,3 | 0,5 | 230 | 120 | - | - | 4,3 |
| FERV103 | 3" | Threaded | 0,4 | 0,6 | 240 | 150 | - | - | 7,3 |
| FERV105 | 4" | Threaded | 0,4 | 0,6 | 295 | 192 | - | - | 11,5 |
| FERV110 | 3" DN 80 | Flanged | 0,5 | 0,8 | 275 | 205 | 8 | 18 | 14,8 |
| FERV111 | 4" DN 100 | Flanged | 0,5 | 0,8 | 315 | 240 | 8 | 18 | 21,8 |
| FERV112 | 5" DN 125 | Flanged | 0,5 | 1,0 | 300 | 250 | 8 | 18 | 28,0 |
| FERV113 | 6" DN 150 | Flanged | 0,6 | 1,0 | 390 | 320 | 8 | 22 | 50,0 |
| FERV114 | 8" DN 200/150 | Flanged | 0,6 | 1,0 | 390 | 340 | 12 | 22 | 63,0 |

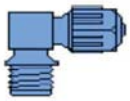
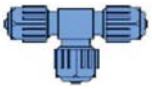
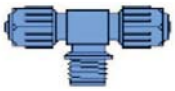
**CONTROLLER FUNCTION**

| | Ø Thread | | | | Ø Flanged | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2" | 2"½ | 3" | 4" | DN 80 | DN 100 | DN 125 | DN 150 | DN 200 |
| Manual valve (3 ways) | FERV141 | FERV142 | FERV143 | FERV144 | FERV150 | FERV151 | FERV152 | FERV153 | FERV154 |
| Electric valve NC 24 VAC 9 bar (3 ways) | FERV221 | FERV222 | FERV223 | FERV224 | FERV230 | FERV231 | FERV232 | FERV233 | FERV234 |
| Electric valve NA 24 VAC 9 bar (3 ways) | FERV241 | FERV242 | FERV243 | FERV244 | FERV250 | FERV251 | FERV252 | FERV253 | FERV254 |
| Electric valve latch 6 - 40 V (3 ways) | FERV261 | FERV262 | FERV263 | FERV264 | FERV270 | FERV271 | FERV272 | FERV273 | FERV274 |
| Pressure reducer valve (3 ways) 12 bar | FERV321 | FERV322 | FERV323 | FERV324 | FERV330 | FERV331 | FERV332 | FERV333 | FERV334 |
| Pressure sustaining valve (3 ways) 12 bar | FERV341 | FERV342 | FERV343 | FERV344 | FERV350 | FERV351 | FERV352 | FERV353 | FERV354 |
| Electric valve 24 VAC rid. pressure (3 ways) | FERV361 | FERV362 | FERV363 | FERV364 | FERV370 | FERV371 | FERV372 | FERV373 | FERV374 |
| Electric valve 12 V DC | FERV449 | FERV450 | FERV451 | FERV452 | FERV455 | FERV456 | FERV457 | FERV458 | FERV459 |



## MINI FITTING FOR VALVES

| Code | Type | Ø | |
|---|---|---|---|
| RTG001 | Elbow for pipe | 6 x ⅛" M |  |
| RTG002 | | 6 x ¼" M | |
| RTG003 | | 8 x ⅛" M | |
| RTG004 | | 8 x ¼" M | |
| RTD001 | Bushing m. for pipe | 6 x ⅛" M | |
| RTD002 | | 6 x ¼" M | |
| RTD003 | | 8 x ⅛" M | |
| RTD004 | | 8 x ¼" M | |
| RTT320 | Plug for pipe | ⅛" M | |
| RTT321 | | ¼" M | |
| RTN001 | Nipple for pipe | ⅛" M x ⅛"M | |
| RTN002 | | ¼" M x ¼"M | |
| RTN003 | | ¼" M x ⅛"M | |
| RTT300 | Tee for pipe | 6 x 6 x 6 |  |
| RTT301 | | 8 x 8 x 8 | |
| RTT315 | | 6 x 6 x ⅛" M | |
| RTT316 | | 6 x 6 x ¼" M | |
| RTT317 | | 8 x 8 x ⅛" M | |
| RTT318 | | 8 x 8 x ¼" M | |
| RTT310 | | 6 x ⅛" M x 6 |  |
| RTT311 | | 6 x ¼" M x 6 | |
| RTT312 | | 8 x ⅛" M x 8 | |
| RTT313 | | 8 x ¼" M x 8 | |
| RTM200 | Coupling for pipe | 6 x 6 | |
| RTM201 | | 8 x 8 | |
| RTM202 | | 6 x 8 | |
| RTR099 | Reducer for pipe | ½" M x ⅛" F | |
| RTR098 | | ½" M x ¼" F | |
| RTR097 | | ½" M x ⅜" F | |
| FERC1645 | Valve 3 ways | ⅛" F x ⅛" F x ⅛"F x ¼" M | |

**MICROPIPE FOR HYDRAULIC CONTROL SEE ON PAGE 45**

## AJUSTABLE DIRECT ACTION PRESSURE REDUCER

The Adjustable Direct Acting Pressure Reducer is actuated by a pressure responsive diaphragm, which seeks to reach equilibrium between hydraulic and set spring force. They are built of reinforced plastic that endows it with excellent hydraulic performance capabilities and high mechanical strength. It reduces higher upstream pressure to lower constant downstream pressure regardless of fluctuating demand or varying upstream.

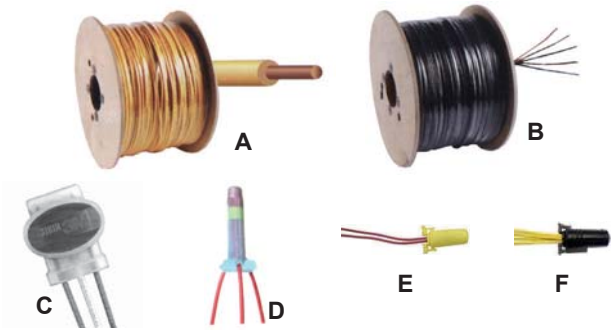
| MINI PILOTS IN PLASTIC FOR VALVES 1"½ ÷ 4" (DN40 ÷ DN100) | | | | |
|---|---|---|---|---|
| Code | Model | Description | Press. bar Min | Press. bar Max |
| APL013 | PC-Sharp-X-P | Mini Pilot multi function 3 ways in plastic | 0,5 | 3,0 |
| APL011 | | | 1,0 | 7,0 |
| APL017 | | | 0,8 | 6,5 |
| APL015 | PC-20-A-P | Mini Pilot reducer pressure 2 ways in plastic | | |
| APL014 | | | 0,5 | 3,0 |
| APL016 | PC-3Q-P | Mini Pilot quick relief valve | 0,8 | 6,5 |
| APL012 | PC-X-M-P | Mini Pilot reducer-sustaining pressure 3 ways in metal/plastic | 1,0 | 7,0 |
| APL009 | #2PB | 2 ways in metal | | 16,0 |

| MINI PILOTS IN PLASTIC SC SERIES | | | |
|---|---|---|---|
| Description | | Pack | Code |
| Mini pilot | Pilot multi function 3 ways in plastic SC | 1 | FERC1536 |

## ► LOW VOLTAGE LIGHTING CABLE

This specification covers the construction requirements for two conductor underground low energy circuit cables for outdoor low voltage lighting. Construction consists of stranded uncoated annealed copper conductors, laid parallel and insulated with polyvinyl chloride. Listed by UL or ETL or CSA. Bunch or rope stranded uncoated annealed copper conforming to UL requirements. The two conductors are laid parallel and insulated. A continuous web shall keep the conductors together. Black polyvinyl chloride conforming to Underwriters Laboratories Class 43 60 °C thermoplastic, suitable for direct burial. One leg has raised ridges for polarity.

| Code | Mt. Coil | Pic. | Model | Colour | N° Wires | Ø mm² |
|---|---|---|---|---|---|---|
| CCV008 | 760 | A | Cable unipolar PAIGE | black | 1 | 1,50 |
| CCV010 | | | | yellow | | |
| CCV009 | | | | black | | 2,50 |
| CCV017 | 304 | | | yellow | | |
| CCV050 | 152 | B | Cable multipolar PAIGE | | 2 | 0,82 |
| CCV051 | 76 | | | | 5 | |
| CCV052 | | | | | 7 | |
| CCV053 | | | | | 10 | |
| CCV054 | | | | | 13 | |
| OAA015 | | C | Connector | | | 2,50 |
| OAA008 | | D | DBR/Y-6 | | | |
| OAA051 | | E | Resin 48V | LV9000 Landscape use | | 6,00 |
| OAA016 | | F | | LV9500 Professional use | | |




| MAX DISTANCE CONNECTION TO THE VALVES | |
|---|---|
| Cable (mm²) | Max distance (m) |
| 0,81 | 274 |
| 0,82 | 277 |
| 1,60 | 539 |

Kind of line singlephase ● working temperature - 30°C ● voltage - 24 V c.a. ● Absorption - 0,35 Amp

## ► UNDERGROUND CABLE LOCATOR

### UNDERGROUND CABLE LOCATOR SC-PRO7 - CODE ORV020

The Sc-Pro7 Underground Cable Locator is a low cost tester for contractors and maintenance personnel. Incorporating a dual frequency transmitter and sensitive receiver, it tracks many types of cabling, including CATV, electrical, telephone, and lighting. It transmits an easy to follow beep signal that is tracked by the receiver. Simply connect the transmitter to ground and the wire to be tracked and turn it on. Follow the beeps with the receiver using the visual meter, external speaker, or a headset. It is that simple.

**DATA: Battery:** Transmitter: Battery 8D Alkaline - Receiver: battery alkaline 9V (not included) ● **Duration battery:** Transmitter: 50 hours - Receiver: 50 hours ● **Frequency:** Of transmitter: 1748Hz ● **Power:** 750V p-p, 285V rms ● **Distance:** Until 600 meters ● **Depth:** 1 meter.

### UNDERGROUND CABLE LOCATOR SC-PRO8 - CODE ORV021

Respect to the model Sc-Pro7, the SC-Pro8 has 5 more features: Battery of transmitter ● rechargeable (charger included) ● Transmitter with more power of 20% ● Possibility wireless transmission data to monitor.

**DATA: Battery:** Transmitter 12V 1.5Ah rechargeable - Receiver 9V standard ● **Power output:** - 900V P-P ● **Distance:** Until 1200 meters ● **Depth:** Until 2.5 meters ● **Weight:** 3.5 Kg.

### DIGITAL UNDERGROUND CABLE LOCATOR SC-PRO9 - CODE ORV023

NEW

The Pro900 Digital Underground Cable Locator is a full featured digital underground locator for contractors and maintenance personnel. Incorporating three different locating frequencies, the Pro900 tracks metallic cabling, including CATV, electrical, telephone, sprinkler, and lighting. The Pro900 transmits solid or intermittent signals that are easy to follow. The digital signal reception allows for crystal clear tone reception in most situations with either null or peak reception and features a KOSS stereo headset.

When you first use the Pro900, immediately you notice the clear, clean, interference free signal. No buzzing, no AC crackling, no drowning of your signal beneath the local electrical transformer or electric cable. All of that garbage is filtered out. What remains is a distinct beeping or continuous tone, easy to follow, easy to track.

Another big advantage to the Pro900 is its 2 inductive mode capabilities. The Pro900 has both inductive clamp and inductive antenna modes. These wireless connection methods give the Pro900 incredible flexibility when tracking wires and cable that you either can't or don't wish to disconnect, like live electrical or in-service CATV lines.

The Pro900 incorporates a 50/60Hz passive locating mode, which identifies electrical sources (power cables) and tracks them without using a transmitter of any kind. Contractors can identify the path of 50/60 Hz underground cables without disconnecting them or connecting to the cable. SC-Pro9.

**DATA:** Monitoring depth 2,4 mt ● Distance 1500 mt with direct connection ● Distance unlimited with broadcast and leapfrogging mode ● Working frequency One 2 kHz direct connection ● Working frequency Two 33 kHz direct connection ● Working frequency Three 175 kHz through tongs and antenna ● Signal output 900 V max pick 1 w ● Transmitter Power 8 cell D LR20 or receiver external power 1 9v.

# LANDSCAPE

## ► BROWN DRIPLINES FOR LANDSCAPE

## COMPENSATING DRIPLINE GR

Large turbulent flow path emitters provide unmatched plugging resistance resulting in greater long-term reliability and less maintenance even in poor water quality conditions. Industry leading Cv performance (<3%) delivers more consistent emission uniformity. Top quality resins and true 1-piece manufacturing ensure maximum tensile strength for high-pressure operations, flushing and reliability in the most extreme conditions.
Standard and custom emitter spacing available in multiples of 8 to 60 inches.
Ideal applications include subsurface row crops, cotton & alfalfa, as well as orchards, vineyards
(for undulating terrain use P.C.2 DripLine)
**Nominal flow rate of the dripper 2,0 l/h** (on request 1,6 e 3,8 l/h).
**Suggested filtration 120 mesh.**

| DRIPLINE Ø 16 GR | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Thic | Spac. cm | Coil mt | l/h | Code | $P_{max}$ bar | Ø mm int. | Ø mm ext. | Filtr. mesh |
| 1,1 mm 39 mils | 30 | 100 | 2 | TAG561 | 2,0 | 13,8 | 15,8 | 120 |
| | | 25 | | TAG568 | | | | |

N.B.: On request spacing between cm 15 to cm 100

| VARIANCE OF FLOW RATE L/H CONSIDERING PRESSURE (M.C.A.) | | | | | |
|---|---|---|---|---|---|
| bar | | 0,5 | 1 | 1,5 | 2 |
| Ø 16 | l/h | 1,3 | 2,0 | 2,5 | 2,8 |

Other models on request

| LENGHT MAX (MT) C.U. 90% OF DRIPLINE (NO SLOPE) | | | | | |
|---|---|---|---|---|---|
| | Spacing of drippers | | | | |
| | 30 | 40 | 50 | 60 | 80 |
| Ø 16 | 55 | 70 | 90 | 105 | 130 |

## COMPENSATING DRIPLINE PC2

Large turbulent flow path, double filtration inlets and the widest pressure compensation range (6-65 psi) in the industry means uncompromising and unmatched performance.
Dual Self-flushing Mechanism flushes at every start-up ensuring reliable operation and less maintenance day-after-day for year-after-year.
Even the most severe field elevation changes are no match for P.C.2 membrane pressure compensation, ensuring plants from the top to the bottom of the hill will receive exactly the same amount of water.
Standard and custom emitter spacing available in multiples of 8 to 60 inches.
Ideal applications include vineyards, orchards, row crops and cotton in undulating terrain both surface and subsurface.

### CHARACTERISTICS

- thickness: 1,1 mm
- flow rate of the dripper 2.2 lt/h (on request 1,6 e 3,8 l/h)
- filtration suggested 140 mesh
- range of compensation 0.5 -4.5 bar
- max pressure 5 bar

| LENGHT MAX (MT) DRIPLINE (NO SLOPE) | | |
|---|---|---|
| Pressure IN (bar) | Spacing mt | |
| | 0,3 | 0,4 |
| 1,5 | 77 | 99 |
| 2,0 | 91 | 116 |
| 2,5 | 101 | 130 |
| 3,0 | 110 | 141 |
| 3,5 | 118 | 151 |
| 4,0 | 124 | 159 |
| 4,5 | 130 | 167 |

| Spacing (cm) | 30 | | | 40 | | |
|---|---|---|---|---|---|---|
| Flow Rate (l/h) | 2,2 | | | | | |
| Coil (mt) | 50 | 100 | 400 | 50 | 100 | 400 |
| Code | TAG555 | TAG551 | TAG557 | TAG556 | TAG552 | TAG558 |

N.B.: On request spacing from cm 15 to cm 100

## Dripline covered in black polyester

| Spacing (cm) | 30 | 40 |
|---|---|---|
| Flow (l/h) | 2,2 | |
| Flow (l/h/mt) | 7,3 | 5,5 |
| Roll (mt) | 200• | |
| Code | TAG1560 | TAG1562 |

• 2 rolls of 100 mt each one covered

**PC2 membrane compensation**

The special fabric of woven polyester black (greater resistance to UV radiation), it makes uniform distribution of the water between drippers since the special polyester fabric does not absorb water but allows its sliding between the emitter and the thickness of coating.

## PRESSURE SELF COMPENSATING DRIPLINE XF RAIN BIRD SERIES

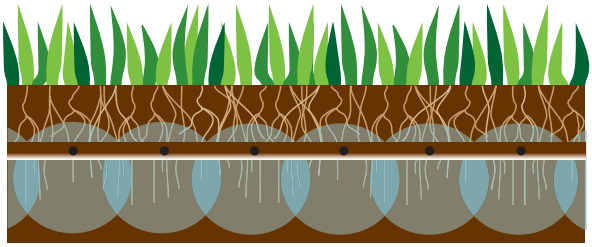
| Code | Spacing cm | Coil meters |
|---|---|---|
| TAG543 | 33 | 25 |
| TAG544 | | 50 |
| TAG545 | | 100 |
| TAG546 | | 200 |
| TAG547 | 50 | 100 |

- Designed to irrigate ground cover, dense plantings, hedge rows, trees and more
- Extra flexible tubing for fast, easy installation
- Patent pending emitter design provides for increased reliability
- Longer lateral runs than competition with fewer components

**SPECIFICATIONS**: **pressure** between 0,59 and 4,14 bar ● **flow rate** 2,3 l/h ● **water temperature** until 38° C - **ambient** until 52° C ● **required fi**ltration 120 mesh **DIMENSIONS**: **ø outside**: 16,1 mm ● **ø inside**: 13,6 mm ● **thickness** 1,2 mm

| Maximum Lateral Length (Meters) XF and XFS | | |
|---|---|---|
| Inlet Pressure Bar | 33 cm Spacing Nominal flow rate 2,3 l/h | ø mm |
| 1,0 | 79 | 16 |
| 1,7 | 104 | |
| 2,4 | 121 | |
| 3,1 | 126 | |
| 3,8 | 147 | |

## PRESSURE SELF COMPENSATING DRIPLINE XF*S* RAIN BIRD SERIES for *Sub-surface*



Designed for irrigation system under turf grass or shrub and groundcover areas. Suitable for small areas with lots of plants, narrow paths, curves and ups and downs.
17 mm and special fittings for XFS dripline can be used. Dual layered tubing (brown colour over black) provides unmatched resistance to chemical, UV damages and algae growth. Resists clogging by use of extra-wide flow path combined with a self flushing action.

**SPECIFICATIONS**: **pressure** between 0,58 and 4,14 bar ● **flow rate** 2,3 l/h ● **water temperature** until 37,8 °C - **ambient** until 51,7 °C ● required filtration: 120 mesh **DIMENSIONS**: **ø outside** 16,10 mm ● **ø inside** 13,61 mm ● **thickness** 1,24 mm

| Code | Spacing cm | Color | Coil meters |
|---|---|---|---|
| TAG549 | 33 | Bown | 100 |
| TAG548 | 50 | | |
| TAG569 | | Purple | |

Rain Bird's patent pending Copper Shield Technology protects the emitter from root intrusion without requiring EPA-approved handling procedures unlike some manufacturers who use harsh chemicals or treated filters to protect the emitter from root intrusion.

**FITTING FOR DRIPLINE AND PIPE PE SEE ON PAGE 39**

**AIR BLEED SEE ON PAGE 53**

## ► ACCESSORIES

### COMPENSATING DRAINAGE RING FOR MASTS

Pipe drainage ø 50, lenght 1500 mm with insert for dripline with connection mt. 1 of pipe ø 16
**Working pressure:** 0.5-3.5
**Range flow rate:** +-7%

| Code | Ø x mt. | Flow rate (lt/h) | N. Drippers | Colour |
|---|---|---|---|---|
| TDR210 | 50 x 1,5 | 6,9 | 3 | white |
| TDR245 | | 9,2 | 4 | yellow |
| TDR250 | | 12,0 | 5 | red |

Other capacities and sizes on request

### ANTI TORSION AND ANTI FREEZE PIPE

**Maximum pressure:** 24 bar

| Standard yellow | | Long life orange | | | |
|---|---|---|---|---|---|
| PVC 3 layers | Bar | PRV 5 layers | Bar | Ø mm | Pack mt |
| OTG032 | 24 | OTG053 | 30 | 15 (5/8") | 1 x 15 |
| OTG033 | | OTG054 | | | 1 x 25 |
| OTG034 | | OTG055 | 24 | | 1 x 50 |
| OTG036 | 21 | OTG057 | | 19 (¾") | |
| OTG038 | 8 | OTG059 | 21 | 25 (1") | |

STANDARD

LONG DURATION

### SUPPORT FOR WATER TAP

| Code | Type | Pic. | Details |
|---|---|---|---|
| OCL020 | Little column | A | Green colour high cm. 130 with water tap |
| OPZ400 | Garden hose valve box | B | Underground installation with water tap |
| OPZ401 | Cover | | Replacement cover |

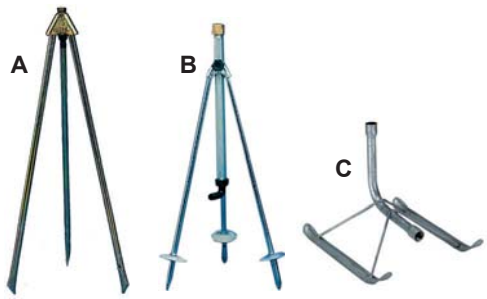
**BALL WATER TAP SEE ON PAGE 51**

### ACCESSORIES FOR GARDEN

| Code | Type | Pic. | Details |
|---|---|---|---|
| OPI002 | Pattern metal trigger | A | In alluminium without fitting |
| OPI003 | Pattern metal trigger | B | In metal comfort version |
| FPS001 | Hose connector | C | With thread m ø¾" |
| FPS002 | Coupling | D | For pipe 16/19 |

### LITTLE COLUMNS FOR SPRINKLERS

| Code | Pic. | Description |
|---|---|---|
| ACL005 | A | Column in inox galvanized - High 50-70 cm - Female thread ½" |
| ACL003 | | Column in inox galvanized - High 50-70 cm - Female thread ¾" |
| ACL004 | B | Column in inox galvanized - High 100 cm - Male thread 1" |
| OST049 | C | Support for sprinkler female thread 1" - High 40 cm |



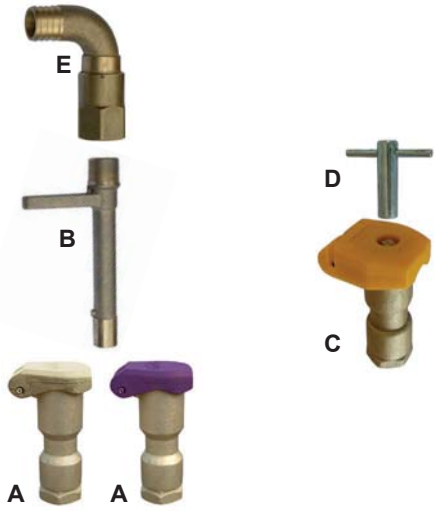

**SPRINKLERS SEE ON PAGE 46**

## QUICK COULPLING VALVE AND KEY IN PE

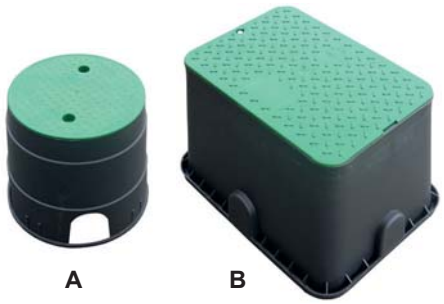
| Code | Pic. | Model | Ø | Pack |
|---|---|---|---|---|
| FIP001 | A | Quick coupling | ¾" M | 1/5 |
| FIP002 | | Quick coupling | 1" M | |
| FCH010 | B | Key for quick coupling | ¾" M | |
| • A request purple cover for wastewater | | | | |

## QUICK COULPING VALVE IN BRONZE

| Code | Pic. | Model | height cm | Connection Ø |
|---|---|---|---|---|
| OAC130 | A | Valve 75 | 10 | ¾" F |
| OAC131 | | Valve 100 | 14 | 1" F |
| OAC134 | | Valve 150 | 17 | 1"½ F |
| OCH010 | B | Key for lockable 75 | | ½" F - ¾" M |
| OCH011 | | Key for lockable 100 | | ¾" F - 1" M |
| OCH014 | | Key for lockable 150 | | 1" F - 1"½ M |
| OAC127 | C | Valve BT Lock cover with lock | | ¾" |
| OAC128 | | | | 1" |
| OAC135 | A | Valve BT | | |
| OCH017 | B | Key x BT 1" | | |
| OCH020 | D | Bt Lock | | Lockable lid |
| OAC132 | E | Swivel elbow 75 | | ¾" F x hose ¾" |
| OAC133 | | Swivel elbow 100 | | 1" F x hose 1" |
| OAC136 | | Swivel elbow 150 | | 1"½ F x hose 1"½ |




## VALVE BOXES IN LIGHT RESIN WITH HANDLE



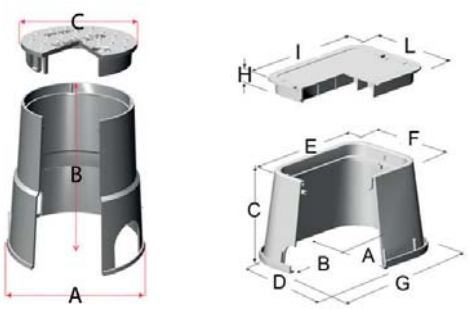

"Valve boxes in synthetic LIGHT resin to accommodate and protect valves, regulators and little buried hydrants.

Inspectable boxes studied to ease installation and further maintenance operations of a buried system. Ideal protection for manual sockets, valves, water meters, interception shutters, etc. Valve boxes built in propylene with antifilth green cover."

| Code | Type | Pic. |
|---|---|---|
| OPZ040 | Circular Mini | A |
| OPZ041 | Circular | |
| OPZ042 | Rectangular | B |
| OPZ043 | Rectangular Jumbo | |

## VALVE BOXES DIMENSIONS AND WEIGHT WITH HANDLE

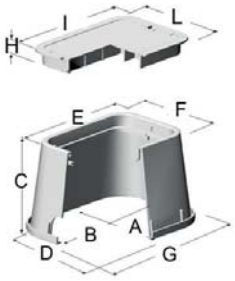
| LIGHT SERIES | | A | B | C | D | E | F | G | H | I | L | Weight Kg | pz x Pallet |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OPZ040 | Circular Mini | 212 | 230 | 160 | | | | | | | | 0,5 | 800 |
| OPZ041 | Circular | 300 | 250 | 240 | | | | | | | | 0,9 | 396 |
| OPZ042 | Rectangular | 340 | 470 | 300 | 380 | 395 | 270 | 510 | 40 | 395 | 270 | 4,2 | 168 |
| OPZ043 | Rectangular Jumbo | 460 | 600 | 300 | 500 | 510 | 360 | 640 | 40 | 510 | 360 | 6,3 | 112 |



## VALVE BOXES CARSON C.S. HEAVY SERIES

The most complete line of plastic access boxes for housing irrigation control valves available. Found on golf courses, community parks, business parks and schools, Carson valve boxes are the strongest and best performing products of their kind. Manufactured using a unique low pressure structural foam molding process, Carson has the valve box to meet any of your engineering specification needs. Carson valve boxes are "Specified and Preferred Worldwide".

| Code | Type | Pic. |
|---|---|---|
| OPZ600 | Circular Mini | A |
| OPZ601 | Circular | B |
| OPZ602 | Rectangular | C |
| OPZ603 | Rectangular Jumbo | D |
| OPZ604 | Rectangular Maxi | E |
| OPZ605 | Rectangular Big | F |

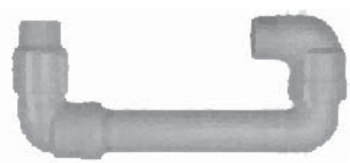



### VALVE BOXES DIMENSIONS AND WEIGHT

| C.S. HEAVY SERIES | | A | B | C | D | E | F | G | H | I | L | Weight Kg | pz x Pallet |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OPZ600 | Circular Mini | 195 | 230 | 159 | | | | | | | | 0,57 | 260 |
| OPZ601 | Circular | 330 | 260 | 250 | | | | | | | | 2,04 | 99 |
| OPZ602 | Rectangular | 368 | 495 | 311 | 406 | 432 | 305 | 533 | 48 | 429 | 298 | 4,54 | 66 |
| OPZ603 | Rectangular Jumbo | 441 | 606 | 305 | 487 | 545 | 375 | 654 | 51 | 541 | 378 | 6,08 | 44 |
| OPZ604 | Rectangular Maxi | 513 | 752 | 387 | 592 | 641 | 400 | 832 | 57 | 625 | 390 | 11,8 | 26 |
| OPZ605 | Rectangular Big | 622 | 953 | 457 | 706 | 826 | 494 | 1037 | 57 | 826 | 495 | 16,33 | 22 |

## ► FITTINGS

### JOINTS DURA SERIES

| Code | Model | Type | Connections | Length cm | ø | Pack | |
|---|---|---|---|---|---|---|---|
| OAC035 | ATD4-005 | Vandal resistant joint | | | ½" | 1 | |
| OAC036 | ATD4-007 | | | | ¾" | | |
| OAC085 | ATD8-010 | | | | 1" | | |
| OAC042 | FME005 | Flexible straight joint | ½"M x elbow ½"M | | | | |
| OAC041 | FME074 | | ½"M x elbow ¾"M | | | | |
| OAC040 | FME007 | | ¾"M x elbow ¾"M | | | | |
| OAC096 | 1-B1-22-1-12 | 4 pieces joint | | 30 | 1" | |  |
| OAC098 | 1-B1-22-1-18 | | | 45 | | | |
| OAC097 | 3-B1-22-1-12 | | | 30 | 1"½ | | |
| OAC038 | 3-B1-22-1-18 | | | 45 | | | |

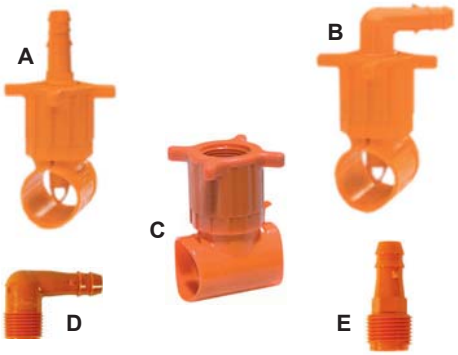
## FLAGS Used to indicate location of sprinklers.

| Code | Description | Colour |
|---|---|---|
| OBA015 | Flag cm 10 x 12 | White |
| OBA016 | | Silver |
| OBA017 | | Yellow |

## ACCESSORIES FOR SPRINKLERS

| Code | Tipo | | Details | Pack. |
|---|---|---|---|---|
| OAC100 | Extention PFE | | From 11,5 to 20 cm - connection male thread ¾" M x ½" ¾" M | 40 |
| OAC013 | Fitting CUT-OFF | | M x M ½" - ¾" | 25 |
| OAC006 | | | M x M ¾" - ¾" L = 15 cm | |
| SOAC026 | Straight fitting | | For Ø 16/17 mm Easy Pipe Male Thread ½" | 50 |
| SOAC027 | | | For Ø 16/17 mm Easy Pipe Male Thread ¾" | 1 |
| SOAC024 | Elbow 90° male | | For Ø 16/17 mm Easy Pipe Male Thread ½" | |
| SOAC025 | | | For Ø 16/17 mm Easy Pipe Male Thread ¾" | |

## QUICK SADDLE CLAMP




| Code | Type | Pic. | Details | | Pack |
|---|---|---|---|---|---|
| RPS980 | Ø 25 Easy Pipe | A | x pipe Ø 25 mm | Out Easy Pipe straight | 10 |
| RPS981 | Ø 32 Easy Pipe | | x pipe Ø 32 mm | | |
| RPS990 | Ø 25 Easy Pipe | B | x pipe Ø 25 mm | Out Easy Pipe a elbow | |
| RPS991 | Ø 32 Easy Pipe | | x pipe Ø 32 mm | | |
| RPS994 | Ø 25 X ½" F | C | x pipe Ø 25 mm | connection F Ø ½" | |
| RPS993 | Ø 25 X ¾" F | | | | |
| RPS995 | Ø 32 X ½" F | | x pipe Ø 32 mm | | |
| RPS996 | Ø 32 X ¾" F | | x pipe Ø 32 mm | connection F Ø ¾" | |
| SOAC100 | ½" M x ø16 H.A. | D | Elbow H.A. | | |
| SOAC101 | | E | Straight joint H.A. | | |
| SOAC102 | ¾" M x ø16 H.A. | D | Elbow H.A. | | |
| SOAC103 | | E | Straight joint H.A. | | |

## NOZZLES MP ROTATOR

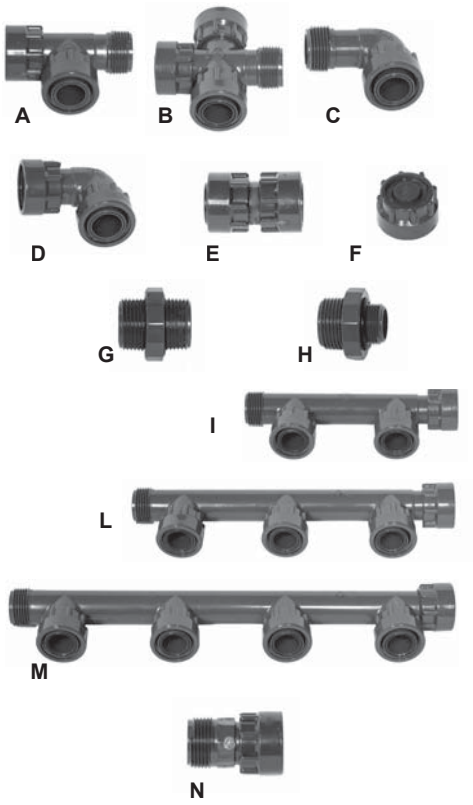
It can be used on any sprinklers with male thread.
Ability to achieve considerable jet range with very low water consumption; this allows to solve those that are the problems related to low water flow; the rotational movement also allows a better distribution of water.

**Features**:
- multiple jets
- multi jet trajectory wind resistant
- device double-pop to keep the sprinkler clean
- removable inlet filter
- adjustable arc
- reduction of the radius until 25%

| **Universl nozzles multi jet low water consumption male or female** | | | | | | |
|---|---|---|---|---|---|---|
| Description | | Angles | 90°÷210° | | 360° | |
| | | | Radius mt | Flow l/m | Radius mt | Flow l/m |
| Multi-stream nozzles•• | mp1000 | 90°÷210° e 360° | 3,7 ÷ 4,3 | 0,6 ÷ 1,7 | 3,5 ÷ 4,3 | 2,4 ÷ 2,9 |
| | mp2000 | 90°÷210° e 360° | 5,5 ÷ 6,1 | 1,2 ÷ 3,4 | 5,2 ÷ 6,1 | 4,7 ÷ 5,8 |
| | mp3000 | 90°-210° e 360° | 8,2 ÷ 9,1 | 2,8 ÷ 8,4 | 8,2 ÷ 9,1 | 11,7 ÷ 14,4 |
| | Cornet/Side | | | | | |

•• Please, specify type, angle size, radius data and thread in the purchase order

## SWIVEL FITTINGS DURA IN PVC

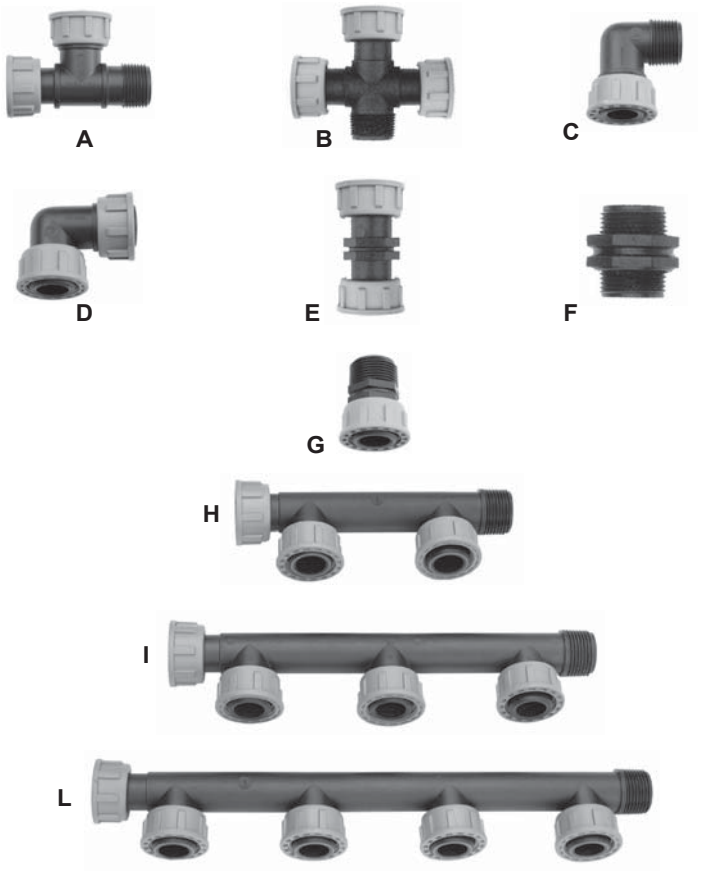



| FITTING IN PVC STUDIED TO MAKE EASY MAINTENANCE OF VALVES | | | | |
|---|---|---|---|---|
| Code | Model | Pic. | Ø | Connection |
| OAC050 | Tee | A | 1” | F/F/M |
| OAC054 | Cross | B | | F/F/F/M |
| OAC053 | Elbow | C | | M/F |
| OAC051 | | D | | F/F |
| OAC052 | Coupling | E | | |
| OAC055 | Cap | F | | F |
| OAC056 | Nipple | G | | M/M |
| OAC057 | Reducer Nipple | H | 1” x ¾” | |

| MANIFOLD FITTING Ø 1” IN PVC TO JOINT VALVES BATTERY AND MANUAL | | | | |
|---|---|---|---|---|
| Code | Model | Pic. | Ø | |
| OAC062 | 2 port | I | 1” | |
| OAC061 | 3 port | L | | |
| OAC060 | 4 port | M | | |

| SWIVEL COUPLING M/F | | | | |
|---|---|---|---|---|
| Code | Model | Pic. | Ø | Connection |
| OAC058 | Union | N | 1” | M/F |

## SWIVEL FITTINGS




| MANIFOLD IN POLYPROPYLENE BLACK TO CONNECT VALVE | | | | |
|---|---|---|---|---|
| Code | Type | Pic. | Ø | Connection |
| SRTF001 | T | A | 1” | F/F/M |
| SRTF010 | | | 1”½ | |
| SRTF011 | | | 2” | |
| SRCR001 | Cross | B | 1” | F/F/F/M |
| SRGO004 | Elbow | C | 1” | M/F |
| SRGO005 | | | 1”½ | |
| SRGO006 | | | 2” | |
| SRGO001 | | D | 1” | F/F |
| SRGO002 | | | 1”½ | |
| SRGO003 | | | 2” | |
| SRMF003 | Coupling | E | 1” | |
| SRMF004 | | F | 1” | M/F |
| SRMF005 | | | 1”½ | |
| SRMF006 | | | 2” | |
| SRNP003 | Nipple with o-ring | G | 1” | M/M |
| SRNP004 | | | 1”½ | |
| SRNP005 | | | 2” | |

| MANIFOLD Ø1” IN PVC BLACK TO CONNECT VALVE | | |
|---|---|---|
| Code | Type | Pic. |
| SRTF002 | 2 outlet | H |
| SRTF003 | 3 outlet | I |
| SRTF004 | 4 outlet | L |

## ► IRRIGATION PROGRAMMER AND ACCESSORIES

### KIT RAIN BIRD WP 1 WITH VALVES

| Code | Model | | Specifications |
|---|---|---|---|
| OPG254 | KIT WP-1 with valves JTV 9V DC | | • 8 start times per day<br>• Programming Schedules:<br>- 7-day weekly<br>- even day / date<br>- Odd day / date with or without on the 31st<br>- cyclic: 1/ up to 15 days<br>• Number of stations:1<br>• Station timing: from 1 minute to 12 hours in 1-minute increments.<br>• Operating temperature: -20° to 70° C.<br>• Maximum operating pressure: 10 bar<br>With JTV Valve 9V DC |

### TAP TIMER RAIN BIRD

| Code | Model | | Specifications |
|---|---|---|---|
| OPG289 | Tap Timer Rain Bird | | • Extra large readout screen and programming dial make it easy to set and review your watering schedules.<br>• In operation, the screen also displays program status such as next scheduled cycle and time remaining on a current cycle.<br>• Advanced features include programming up to two watering times per day on any day(s) of the week, plus “water now” and “cancel” buttons to override programs instantly when desired.<br>• Ideal for use with Rain Bird drip or any hose end sprinklers. Go automatic with your watering in any area of your yard: gardens, landscaping beds, newly seeded as well as established lawns. |

### TAP IRRIGATION COMPUTER

| Code | Model | | Details |
|---|---|---|---|
| OPG248 | GALCON 9001 | | Tap – battery monosector with waterproof valve –quick assembly, simplified programming - waterproof – backnut fitting for a quick disassembly - 9 volt alkaline battery power supply (not included) - irrigation duration from 1 minute until 12 hours- operating pressure 1-10 bar – conn.¾ female with disassembly backnut. |

## SISTEMA WEATHERMATIC "REMOTE CONTROL"
## SMARTLINE CONTROLLER

NEW

Weathermatic
Water Conserving Innovation

**SMARTLINE CONTROLLER - 220 VAC / 50 HZ**

| | Code | Model | Description | Utilization | Expansion |
|---|---|---|---|---|---|
| | OPG190 | SL800 | 4 - Zone Base Model | indoor | SLM2 - 2 Zone Maximum of 8 Zones |
| | OPG191 | SL1600 | | indoor/outdoor | SLM4 - 4 Zone Maximum of 16 Zones |
| | OPG192 | SL4800 | 12 Zone Base Model | | SLM12 - 12 Zone Maximum of 48 zones |
| | OPG193 | SL4800PE-PED | | High Grade Polyethylene Enclosure with the SmartLine SL4800 12-Zone Controller (Base Model) Installed | |
| | OPG194 | SL4800CHARGE | 48 Zone | Battery Powered 48 Zone Controller with Built-In Charge System | |

**ZONE EXPANSION MODULES FOR SMARTLINE**

| | Code | Model | Zone | Utilization |
|---|---|---|---|---|
| | OPG195 | SLM2 | 2 | with SL800 |
| | OPG196 | SLM4 | 4 | with SL1600 |
| | OPG197 | SLM12 | 12 | with SL4800 |

**Basic features:** 4 programs: A, B, C; program D can operate concurrently ● 8 start times per program ● Indoor/Outdoor Rated ● Zone run times settable from 1 min. to 9 hrs. 55 min. ● Rain/Freeze sensing on/off button with Tri-Color LED indicator ● Rain delay of 1 – 7 days ● SLW5 Weather Sensor rain delay programmable from 0 – 99 hours ● Seasonal % adjust by program, by month ● Omit time of day window, day(s) of week, and up to 7 calendar dates ● Programmable zone-to-zone delay 1 min. – 3 hrs. ● Watering days: custom days of the week, odd/even, or interval days ● Run/Soak cycles by program ● Large backlit LCD display ● Non-volatile memory – with no battery required ● Internal 120VAC/230VAC transformer with pre-installed 6' line cord ● 2 Watering modes: Basic Mode and Smart Mode - Basic Mode: User Controlled Conventional Operation - Smart Mode: Daily automatic programming adjustments ● Input: 120VAC/60Hz @ 400mA for 3 valves (SL1600), 5 valve (SL4800) ● Output: 28VAC, 1.0A maximum ● Fuse: 1.0A, slow blow (SL1600), 1.5A, slow blow (SL4800)

## WIRELESS WEATHER STATION

| Code | Model | Description |
|---|---|---|
| OPG349 | SLW5 | Wireless Weather Station for ET Based Watering * 900mhz - 1500' Line of site range ● SLHUB-RF-5 Wireless Receiver included |

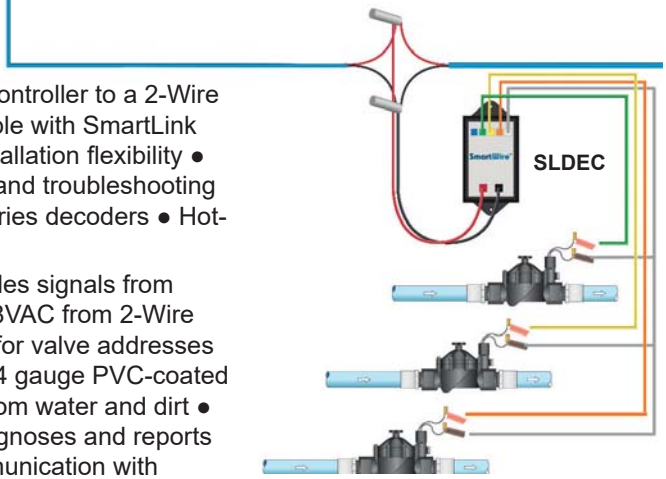
**Features:** Microprocessor records and processes weather data for use in establishing "Smart" Auto Adjust run times on any SmartLine controller ● Rain shut-off settable from 1⁄8 – 1" (3 – 25mm) ● Extended rain delay adds time to rain events before deficits begin to accumulate ● Rain events decrement current deficits in the SmartLine controller ● Freeze shut-off activated at 37°F (3.0°C) ● Protective white solar shields allow normal air flow while protecting sensor from direct sunlight for accurate temperature readings and eliminating the need for regular cleaning and maintenance of the weather station ● Unit can be mounted in sunlight or shade and in close proximity to the roof-line ● Maximum wireless distance from controller to weather station is 1500' (457m) line of site. SLHUB-RF-5 wireless hub included with SLW5 ● On-board diagnostics indicate battery and communication status ● Remote battery strength measurement from the SmartLine controller ● 10-Year battery life ● Adjustable arm plastic bracket for gutter thumb-screw or wall mount ● Operates on 900MHz frequency for superior range and reliability.

## 2-WIRE DECODER SYSTEM SMARTWIRE FOR SMARTLINE CONTROLLER

| SMARTWIRE - 220 VAC / 50 HZ | | | | |
|---|---|---|---|---|
| | Code | Model | Description | |
| | OPG198 | SL9600TW | 96 - Zone 2-Wire System with SmartLine controller and 96 station decoder module | |
| | OPG199 | SLM16DM | Zone Decoder Module for SL1600 SmartLine controller | 16 zone |
| | OPG200 | SLM24DM | | 24 zone |
| | OPG340 | SLM48DM | | 48 zone |
| | OPG341 | SLDEC1 | Valve Decoder | 1 valve |
| | OPG342 | SLDEC2 | | 2 valve |
| | OPG343 | SLDEC4 | | 4 valve |

**How it works:** A SmartWire SLDEC valve decoder is wired to each valve. Each decoder has a programmable address (typically the zone number), which identifies it to the SmartWire SLM48DM 2-Wire decoder module installed in a SmartLine® SL1600 controller.

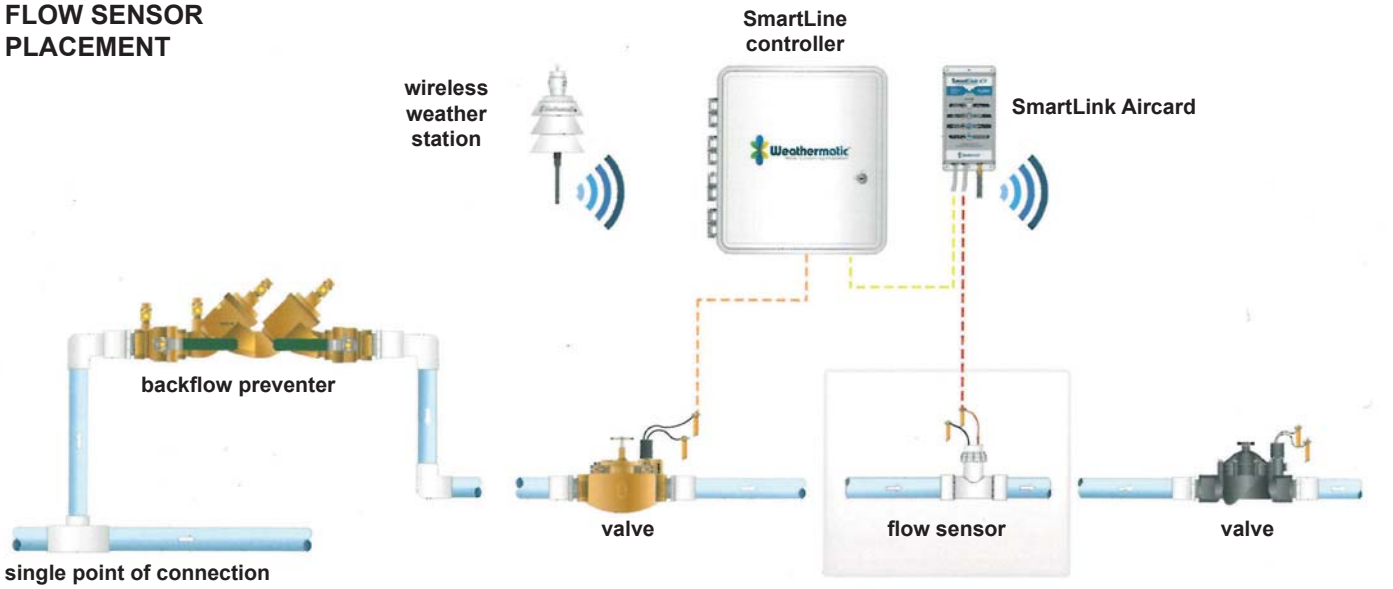
**SLMXXDM**
Installed in SmartLine SL1600 controller




**Decoder Module Features:** Converts the SmartLine® SL1600 Controller to a 2-Wire system for a maximum of 48 zones plus Master Valve ● Compatible with SmartLink ● Connections for up to 3 different 2-Wire paths for maximum installation flexibility ● LED display and status lights for programming, operation status, and troubleshooting with error codes ● Programs and operates SmartWire SLDEC Series decoders ● Hot-swappable installation

**Decoder Features:** 1, 2, and 4 valve decoders available ● Decodes signals from Decoder Module to open and close valves ● Input voltage 24 – 28VAC from 2-Wire path ● Shock resistant ● Surge protection ● Fully programmable for valve addresses using Decoder Module ● Freeze/heat resistant (-20° to 60°C) ● 14 gauge PVC-coated connecting wires ● Sealed electrical components for protection from water and dirt ● Operates valves to a maximum of 100' (30m) from decoder ● Diagnoses and reports failed solenoids to the Decoder Module ● Auto shut-down if communication with Decoder Module is lost

### FLOW SENSOR PLACEMENT



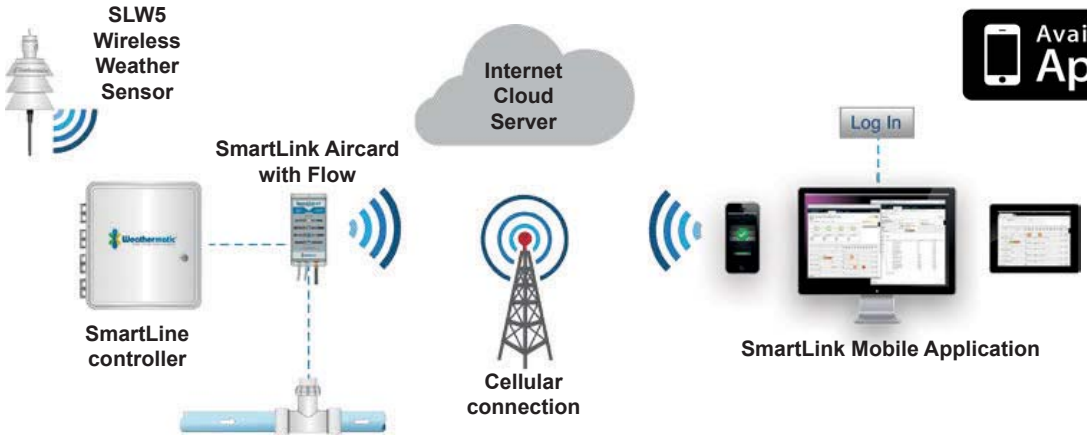
## SMARTLINE SOLAR

**Features:** Converts SmartLine to a totally “portable” water management system by using proven solar technology ● SmartLine is a SWAT tested ET system ● Green power source using 100% renewable energy ● Easy installation for both Conventional and 2-Wire systems ● SmartLine Solar uses industry standard 24VAC valves, which out perform debris-prone latching solenoids required with battery operated systems ● System Diagnostics include Volt meter, Amp meter and Valve Locator ● 2-Wire SmartWire compatible ● LCD display indicates battery and solar power condition ● Dual deep cycle batteries provide up to 7 days of operation with no solar charge ● State of the art Solar Charge Technology (SCT) prolongs battery life and protects batteries from over charge and assures a full charge ● Using standard AC power components makes for easy conversion from solar to grid power and allows early stage construction of landscape in new construction projects.

| Code | Model | Description |
|---|---|---|
| OPG344 | SLSOLAR48 | SmartLine Solar System 48 Zones |

## SMARTLINK WIRELESS LANDSCAPE NETWORK

To manage irrigation from any Internet access




| | Code | Model | Description |
|---|---|---|---|
| | OPG352 | SL-AIRCARDFLOW1FW-GSM | SmartLink Aircard with SmartLine 1-Year Service Plan with Flow plus Warranty for GSM Cellular Network |
| | OPG353 | SL-PLAN1F | SmartLine 1-Year Service Plan plus Flow |

| SPARE PARTS AND ACCESSORIES SMARTLINK | | | |
|---|---|---|---|
| | Code | Model | Description |
| | OPG354 | SL-ANT | SmartLink Aircard Standard Antenna |
| | OPG355 | SL-HIGHGAIN-ANT-WB-3 | 3dBi Gain Antenna with 3 foot cable and ground plane |
| | OPG356 | SL-HIGHGAIN-ANT-WOB-3 | 3dBi Gain Antenna with 3 foot cable |
| | OPG357 | SL-HIGHGAIN-ANT-WB-20 | 3dBi Gain Antenna with 20 foot cable and ground plane |
| | OPG365 | SL-BLADE-ANTENNA | Halfwave cellular dual band antenna |

# FLOWER POWER

The wireless plant monitor that measures sunlight, soil moisture, temperature and fertilizer levels.

NEW

Bluetooth®

**Understanding your plants' needs**

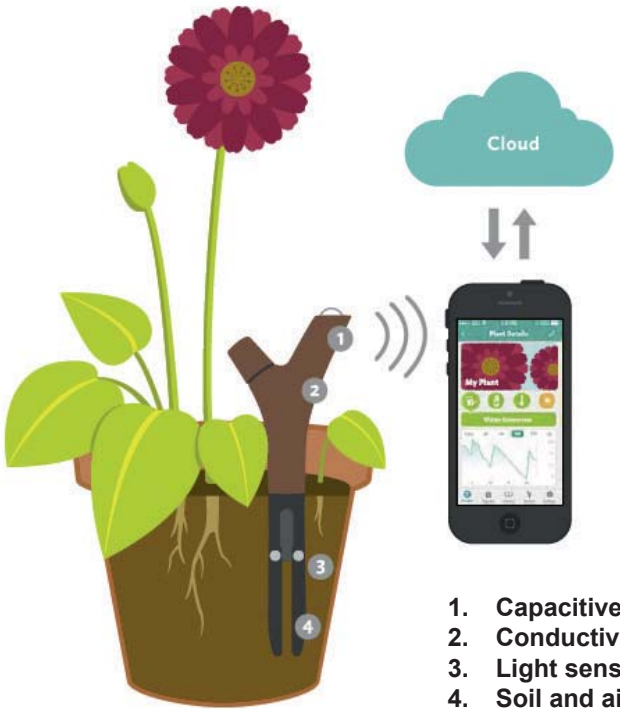
Plants have vital needs. Flower Power uses advanced sensor technologies to monitor the health and well-being of your plants through a range of parameters: 4 embedded sensors measure light intensity, ambient temperature, soil moisture and fertilizer levels. Using the data gathered every 15 minutes by the 4 sensors, the user will be able to understand the exact requirements of their plants.

**Suitable for indoor and outdoor use**

The materials chosen for manufacturing the Flower Power ensure the product will be watertight and robust. The Flower Power may be used both inside and outside (from -10 °C to 55° C). Waterproof, it can withstand watering, rain and liquid fertilizer. Place it in the ground or in a pot and monitor the changes in your plants and garden.

**Bluetooth Smart**

The data retrieved by the Flower Power is sent to your smartphone or tablet. How? The Flower Power is part of a new generation of devices embedding Bluetooth low energy technology which allows it to communicate with Bluetooth Smart Ready devices. Bluetooth Low Energy, integrated into the most recent Bluetooth version (v4.0), is the latest wireless technological standard which consumes very little energy and is therefore eco-friendly.




**Monitoring of more than one plant at a time**

A Flower Power can monitor several plants in the same pot, in a planter or on a small plot of land if the conditions of watering, soil drainage, exposure to the sun and wind are uniform.

**Real time monitoring**

When you are near your Flower Power, you can use Live mode to check the light intensity, ambient temperature and soil humidity.

• Every 15 minutes Flower Power measures four data sources and stores the data in its memory.

• Every 2 hours Flower Power sends data to your Smartphone via Bluetooth Low Energy. If you are not within Bluetooth range, it keeps the data in its memory until you are back (data kept for up to 80 days).

• Alerts are sent to your Smartphone each time one of your plants needs attention.

There is no need to be near your Flower Power to get the notifications.

1. **Capacitive sensor for soil humidity**
2. **Conductive sensor for the fertilizer content of the soil**
3. **Light sensor (which can also act as a warning light)**
4. **Soil and air temperature sensor**

| Code | Color | Pack |
|---|---|---|
| OSN210 | Light blue● | 1 |
| OSN211 | Brown● | |
| OSN212 | Green | |

● On request

**Contents of the box:**

- 1 Flower Power
- 1 User Guide
- 1 AAA Battery

**Weight and dimensions:**

- Dimensions: 190 x 64 x 32 mm
- Weight: 45,4 g (with AAA battery)

**Technical specifications:** Capacitive sensor for soil humidity ● Conductive sensor for the fertilizer content of the soil ● Light sensor (which can also act as a warning light) ● Soil and air temperature sensor ● Movement detector. **Integrated TI CC2540 chip:** Low power consumption: Bluetooth Low Energy connectivity ● 256 kB flash memory for FW updates ● DC/DC 0.9V - 2V to 3.3 V converter ● Ultrasonic welding of plastic components and polyurethane seals for resistance to water (IPx5 and IPx7).

**A free dedicated App**

Download the Flower Power App on your Smartphone or Tablet. The application connects your Flower Power to the Cloud (via 3G/4G or Wi-Fi) where the data is analyzed. After the data is analyzed, you receive an alert in real time when one of your plants has special water, fertilizer, light or temperature needs. Follow the changes in your garden directly or simply consult Parrot's vast but easy to use database.

ANDROID APP ON Google play

Available on the App Store

**Database of more than 6000 plants**

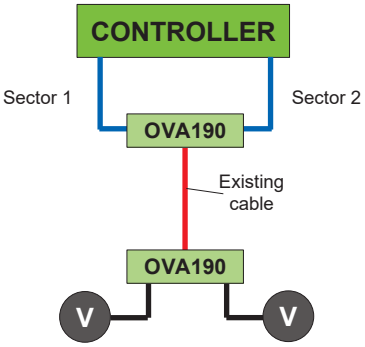
Using the application, the user can select their plants from the database in the Cloud, developed by botanists. More than 6000 varieties are listed and custom advice is given on maintaining each plant.

## MULTISECTOR EXPANSION SYSTEM

| ADDITION 1 SECTOR | | | |
|---|---|---|---|
| Stations | Cables | Valves | Code |
| 2 | 1 | 2 | OVA190 |

**THE CONTROL PANEL CONNECTION BETWEEN 2 SECTORS WITH 2 VALVES AND 1 SINGLE CABLE**

- 2 valves can operate in an independent way, using an existing cable and connecting 2 sectors on the panel control
- To 2 valves that work with 1 cable only, can be attributed different irrigation cycles working in an independent way totally
- Can be programmed as normal valves
- New trench not necessary




## ▶ SPRINKLER AND ACCESSORIES

## UNI-SPRAY RAIN BIRD SPRINKLER SERIES

Pop-up spray heads.

**FEATURES**

- **Height:** 2.1 to 5.5 m
- **Pressure:** 1,0 to 2,1 bar A ½ "BSP female thread
- **Dimensions:** Ø exposed: 3.2 cm.

- Installation, maintenance and inventory.
- Small exposed cover makes the unit virtually invisible for more attractive landscapes.
- For added convenience, these spray heads are shipped with pre-installed van nozzles.
- Save time and speed-Up installation: variable Arc Nozzles (VAN) allow maximum flexibility.
- Uni-spray accepts all rain Bird nozzles and accessories, which simplifies inventory management.
- Van nozzle and screen are easily removable for flushing.
- Internal parts removable from the top of the sprinkler for easy servicing.
- Flow and throw adjustment screw..

| Code | Pre-installed nozzle• | Heights | |
|---|---|---|---|
| | | Range•• | Body••• |
| OIS220 | 12-VAN | 5,1 | 9,6 |
| OIS221 | 15-VAN | | |
| OIS222 | 10-VAN | 10,2 | 15,0 |
| OIS223 | 12-VAN | | |
| OIS224 | 15-VAN | | |
| OIS225 | 18-VAN | | |

• Model of nozzle that can be installed (technical data on www.scarabelli.it): MPR - SQ - VAN - ROTATING NOZZLES

•• Measured sprinkler closed

••• Measured from the nut to the outlet of the nozzle

## 1804 RAIN BIRD SPRINKLER SERIES

### FEATURES

- **Height:** 0.6 to 5.5 m
- **Pressure:** 1,0 to 2,1 bar
- **Connection:** ½ "BSP female thread
- **Dimensions:** Ø exposed: 5,7 cm.

Co-molded wiper seal is molded into the cap and features an encased plastic "cage" to provide unmatched resistance to grit, pressure and environment. Additionally, the pressure activated, multi-funcionl seal design assures a positive seal without excess "flow-by" which enables more heads to be installed on the same valve. String stainless steel soring provides reliable stem re-traction. Two-piece ratchet mechanism on all models allow easy nozzle pattern alignment and provides added durability. All sprinkler components are removable from the top without special tools, providing for quick and easy flushing and maintenance of the sprinkler. Flow and radius adjustment screw. Built-in check valve (optional) holds back up to 4,2 (ideal for turfs and flower beds on slopes or in areas with changing elevation). Built-in stem pressure regulator factory pre-set at 2,1 bar (suitable for turf and flower beds on slopes or in areas with changing elevation/water pressures or in areas exposed to vandalism). Constructed of time-proven UV resistant plastic and corrosion resistant s/s parts.

| Code | Nozzle• | Heights | |
|---|---|---|---|
| | | Range•• | Body••• |
| OIS202 | Only body | 10 | 15 |

• Model of nozzle that can be installed (technical data on www.scarabelli.it): MPR - SQ - VAN – ROTATING NOZZLES

•• Measured sprinkler closed

••• Measured from the nut to the outlet of the nozzle

## RAINBIRD SPRINKLER 3504 SERIES ROTORS

### DESCRIPTION

**Range:** 4.6 to 10.7 m
**Radius with screw:** up to 2.9 m
**Pressure:** 1,7 to 3,8 bar
**Precipitation Rate:** 0.12 to 1.04 $m^3$ / h
**Connection:** ½ "female thread
**Arc Adjustment Range:** 40° to 360°
**Dimensions:** Lifting height: 10.2 cm - Total Height: 16.8 cm
**Exposed:**Ø: 2.9 cm
**Ø total:** 7.9 cm.

• Top-adjust arc adjustment requiring only a flat bladed screwdriver. • Radius adjustment screw allows up to 35% radius reduction without changing nozzles. • Quick check arc/fast forward. • Self-adjusting stator does not require replacement when changing nozzles. • Easily removable filter screen. • Nozzle removal feature. • The 3500 series rotor is available in 4" and sam models. • Optional seal-a-matic (SAM) check valve holds up to 2,1 m of elevation change, to prevent puddling and erosion caused by low head drainage. • 40 - 360° part-circle arc rotation and reversing full-circle rotation in one.

| Code | Description |
|---|---|
| OID890 | 3504-PC Part Circle (40°-360°) and full circle with reverse rotation –Nozzle 2.0 pre-installed |

**PERFORMANCE 3504**

| Pressure bar | Nozzles | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0,75 | | 1,0 | | 1,5 | | 2,0 | | 3,0 | | 4,0 | |
| | Range m | Flow l/m | Range m | Flow l/m | Range m | Flow l/m | Range m | Flow l/m | Range m | Flow l/m | Range m | Flow l/m |
| 1,7 | 4,6 | 2,0 | 6,1 | 2,8 | 7,0 | 4,0 | 8,2 | 5,3 | 8,8 | 8,2 | 9,4 | 11,2 |
| 2,0 | 4,8 | 2,2 | 6,2 | 3,2 | 7,0 | 4,3 | 8,2 | 5,7 | 9,1 | 8,8 | 9,7 | 12,2 |
| 2,5 | 5,2 | 2,7 | 6,4 | 3,5 | 7,0 | 5,0 | 8,2 | 6,5 | 9,4 | 10,0 | 10,1 | 13,8 |
| 3,0 | 5,2 | 2,8 | 6,4 | 4,0 | 7,3 | 5,5 | 8,2 | 7,2 | 9,4 | 11,2 | 10,6 | 15,3 |
| 3,5 | 5,4 | 3,2 | 6,6 | 4,3 | 7,3 | 6,0 | 8,4 | 7,8 | 9,6 | 11,8 | 10,7 | 16,7 |
| 3,8 | 5,5 | 3,2 | 6,7 | 4,5 | 7,3 | 6,2 | 8,5 | 8,2 | 9,8 | 12,3 | 10,7 | 17,3 |

# 5004 RAINBIRD SPRINKLER SERIES

Short to mid-range gear-drive roto.

**DESCRIPTION**

**Range:** 7.6 to 15.2 m • **Radius with screw:** up to 5.7 m • **Pressure:** 1,7 to 4,5 bar • **Rainfall Rate:** 0,17 to 2,19 m³/h • **Connection** ¾ "female thread • **Dimensions:** Lifting height: 10.0 cm - Total Height: 18.5 cm • **Exposed Ø:** 4,1 cm.
Note: the lifting height of the tower is measured from the nut to the nozzle outlet.

- The total height of the body is measured with the turret completely Returned.
- Rain Curtain Nozzles standard on all 5000/5000 plus rotors.
- Large water droplets for greater wind resistance.
- Effective close-in watering.
- Even distribution over the entire radiu.
- Tree of nozzles including four low angle (Angle of Trajectory 10°) and eight standard angle Rain C Nozzles (Angle of Trajectory 25°) provides 7,6 to 15,2 m distance of throw.
- Self-aligning nozzles.
- Installation & Maintenance.
- Slip clutch mechanism for quick adjustment on installation.
- Faster maintenance with a self-cleaning arc adjustment screw.
- The 5000 Plus features a Flow Shut-Off device to stop the flow of water to a particular head while the system is still in operation.
- Top-adjust arc adjustment requiring only a flat-blade screwdriver.
- Radius adjustment screw allows up to 25% radius reduction without changing nozzles.
- Design Solutions.
- Optional on 5000 Plus Series: Stainless Steel riser sleeve on SS models.
- Seal-A-Matic (SAMtm) check valve holds up to 2,1m of elevation change.
- The 5000 Plus Rotors is available in 4", 6", 12", and stainless steel.
- True 4" (10 cm), 6" (15,2 cm) and 12" (30,5 cm) pop-up (measured from the cover to the nozzle).
- 40 - 360° arc rotation and reversing full circle rotation in one. (A non-reversing full circle only unit is also available.
- MPR nozzle set simplifies design and installation by providing matched precipitation from 7,6 to 10,7 m.
- Simplify the design process. Nozzles with various arcs and radii can be mixed in the same zone by using mpr nozzles.

| Code | Description |
|---|---|
| OID902 | 5004 PC /3.0 part circle (40-360°) or full circle , nozze pre-installed 3.0, 20 handnozzles |
| OID904 | 5004 Plus PC /3.0 part circle (40-360°) or full circle , nozze pre-installed 3.0 |
| OID905 | 5004 Plus FC full circle (360°) |

**PERFORMANCE 5004**

| | Nozzle standard trajectory 25° | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1,5 | | 2,0 | | 2,5 | | 3,0 | | 4,0 | | 5,0 | | 6,0 | | 8,0 | |
| Pressure bar | Range m | Flow l/m | Range m | Flow l/m | Range m | Flow l/m | Range m | Flow l/m | Range m | Flow l/m | Range m | Flow l/m | Range m | Flow l/m | Range m | Flow l/m |
| 1,7 | 10,1 | 4,2 | 10,7 | 5,7 | 10,7 | 6,8 | 11,0 | 8,5 | 11,3 | 11,0 | 11,9 | 14,0 | 11,9 | 16,2 | 11,0 | 22,3 |
| 2,0 | 10,2 | 4,7 | 10,8 | 6,0 | 10,9 | 7,3 | 11,2 | 9,2 | 11,6 | 11,8 | 12,1 | 15,2 | 12,4 | 17,5 | 11,8 | 24,2 |
| 2,5 | 10,4 | 5,2 | 11,0 | 6,8 | 11,3 | 8,3 | 11,2 | 10,3 | 12,3 | 13,5 | 12,7 | 17,2 | 13,2 | 20,2 | 13,3 | 27,2 |
| 3,0 | 10,6 | 5,7 | 11,2 | 7,5 | 11,3 | 9,3 | 12,1 | 11,5 | 12,7 | 14,8 | 13,5 | 18,8 | 13,9 | 22,3 | 14,1 | 29,8 |
| 3,5 | 10,7 | 6,2 | 11,3 | 8,2 | 11,3 | 10,0 | 12,2 | 12,3 | 12,8 | 16,2 | 13,7 | 20,5 | 14,2 | 24,2 | 14,9 | 32,2 |
| 4,0 | 10,6 | 6,7 | 11,1 | 8,7 | 11,3 | 10,7 | 12,2 | 13,3 | 12,8 | 17,3 | 13,7 | 22,0 | 14,9 | 25,8 | 15,2 | 34,3 |
| 4,5 | 10,4 | 7,0 | 10,7 | 9,2 | 11,3 | 11,3 | 12,2 | 14,0 | 12,8 | 18,3 | 13,7 | 23,3 | 14,6 | 27,3 | 15,2 | 36,5 |

| | Nozzles low angle 10° | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1,0 | | 1,5 | | 2,0 | | 3,0 | |
| Pressure bar | Range m | Flow l/m | Range m | Flow l/m | Range m | Flow l/m | Range m | Flow l/m |
| 1,7 | 7,6 | 2,8 | 8,2 | 4,3 | 8,8 | 5,5 | 8,8 | 8,5 |
| 2,0 | 8,0 | 3,0 | 8,6 | 4,7 | 9,1 | 6,0 | 9,3 | 9,2 |
| 2,5 | 8,6 | 3,3 | 9,2 | 5,3 | 9,5 | 6,8 | 10,1 | 10,3 |
| 3,0 | 8,8 | 3,7 | 9,4 | 5,8 | 9,7 | 7,5 | 10,6 | 11,3 |
| 3,5 | 8,8 | 4,0 | 9,4 | 6,3 | 9,9 | 8,2 | 10,8 | 12,3 |
| 4,0 | 8,8 | 4,3 | 9,4 | 6,8 | 10,1 | 8,7 | 11,0 | 13,3 |
| 4,5 | 8,8 | 4,5 | 9,4 | 7,3 | 10,1 | 9,3 | 11,0 | 14,0 |

# RAIN BIRD SPRINKLER 8005 SERIES

## DESCRIPTION

- **Height:** 17.4 to 24.7 m
- **Pressure:** 3.5 to 6.9 bar
- **Flow:** 8,24 to 2,54 m³ / h
- **Connection:** 1 “BSP female ***thread***ed

The SAM check valve maintains a pressure load generated by a difference in height of 3,1 m
Rain Curtain Nozzles: 04 (black), 06 (blue), 08 (dark green), 10 (gray), 12 (beige), 14 (light green), 16 (dark brown), 18 (dark blue), 20 (red), 22 (yellow), 24 (orange), 26 (white).
The trajectory of the nozzle is 25°.

- **Dimensions:** Pop up height: 12.7 cm - Overall Height: 25.7 cm
- exposed Ø: 4.8 cm
- **Ø overall:** 7.9 cm

Note: pop-up height measured from cover to center of primary nozzle port.
Overall body height is measured popped down.

| Code | Description |
|---|---|
| OID814 | Pop up F thread inlet Ø1” with plastic riser stem |
| OID815 | Pop up F thread inlet Ø1” with stainless steel covered with riser stem |

## PERFORMANCE 8005 SERIES

| | Nozzle | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 04 (black) | | 06 (sky blue) | | 08 (dark green) | | 10 (grey) | | 12 (beige) | | 14 (bright green) | | 16 (brown) | | 18 (dark blue) | | 20 (red) | | 22 (yellow) | | 24 (orange) | | 26 (white) | |
| Pr. bar | Ran. m | l/m | Ran. m | l/m | Ran. m | l/m | Ran. m | l/m | Ran. m | l/m | Ran. m | l/m | Ran. m | l/m | Ran. m | l/m | Ran. m | l/m | Ran. m | l/m | Ran. m | l/m | Ran. m | l/m |
| 3,5 | 11,9 | 14,3 | 13,7 | 21,3 | 14,9 | 26,5 | 16,1 | 35,0 | 17,5 | 42,0 | 18,0 | 48,2 | 18,7 | 54,7 | 19,2 | 61,5 | 19,9 | 70,8 | 20,0 | 84,7 | 19,3 | 85,2 | 20,0 | 92,8 |
| 4,0 | 11,9 | 15,5 | 13,7 | 22,8 | 14,9 | 29,2 | 16,3 | 38,3 | 17,7 | 45,0 | 18,5 | 52,8 | 19,6 | 59,0 | 19,7 | 66,2 | 20,3 | 75,0 | 21,3 | 87,2 | 20,7 | 91,7 | 21,8 | 100,2 |
| 4,5 | 11,9 | 16,7 | 13,7 | 24,2 | 14,9 | 32,0 | 16,5 | 40,0 | 18,0 | 47,8 | 18,9 | 56,2 | 20,1 | 62,8 | 20,1 | 70,3 | 21,1 | 79,8 | 22,0 | 91,8 | 22,0 | 98,0 | 22,6 | 107,0 |
| 5,0 | 11,9 | 17,7 | 13,7 | 25,7 | 14,9 | 34,8 | 17,7 | 41,7 | 18,3 | 50,8 | 19,2 | 59,0 | 20,4 | 66,5 | 20,6 | 74,5 | 21,6 | 85,2 | 22,4 | 97,3 | 23,0 | 104,3 | 23,2 | 113,3 |
| 5,5 | 11,9 | 18,8 | 13,7 | 27,0 | 14,9 | 37,5 | 16,8 | 45,0 | 18,5 | 53,8 | 19,2 | 62,0 | 20,6 | 70,3 | 21,0 | 79,0 | 21,6 | 90,3 | 22,8 | 103,2 | 23,5 | 110,3 | 24,1 | 119,0 |
| 6,0 | | | | | | | | | 18,6 | 55,0 | 19,6 | 66,0 | 21,0 | 74,2 | 21,5 | 82,5 | 22,1 | 94,2 | 22,9 | 111,8 | 23,9 | 115,3 | 24,1 | 125,0 |
| 6,2 | | | | | | | | | | | 19,8 | 67,7 | 21,0 | 75,7 | 21,7 | 84,0 | | | | | | | | |
| 6,5 | | | | | | | | | | | | | | | | | 22,5 | 98,2 | 23,4 | 114,0 | 24,1 | 120,3 | 24,3 | 131,8 |
| 6,9 | | | | | | | | | | | | | | | | | 22,9 | 101,5 | 23,5 | 116,2 | 24,1 | 124,2 | 24,7 | 137,3 |

# SPRINKLER FOR SPORTS AREA IN SYNTETHIC SPORTGUN

| Ø nozzle mm | Press. kg/cm² | Range m | Flow rate l/min | Flow rate m³/h | Data for 1 sprinkler Superf. irr. m² | Data for 1 sprinkler Intensity mm/h |
|---|---|---|---|---|---|---|
| 10 4 | 2 | 20,5 | 102 | 6,1 | 1.319 | 4,6 |
| | 3 | 23,0 | 124 | 7,4 | 1.734 | 4,2 |
| | 4 | 26,0 | 144 | 8,6 | 2.122 | 4,0 |
| | 5 | 28,5 | 165 | 9,8 | 2.550 | 3,8 |
| 12 4 | 2 | 21,0 | 127 | 7,6 | 1.384 | 5,5 |
| | 3 | 24,0 | 156 | 9,3 | 1.808 | 5,2 |
| | 4 | 27,0 | 180 | 10,8 | 2.289 | 4,7 |
| | 5 | 30,0 | 201 | 12,1 | 2.826 | 4,3 |
| 14 4 | 2 | 21,5 | 173 | 10,4 | 1.451 | 7,1 |
| | 3 | 26,5 | 212 | 12,7 | 2.205 | 5,7 |
| | 4 | 30,5 | 245 | 14,7 | 2.920 | 5,0 |
| | 5 | 33,5 | 274 | 16,4 | 3.523 | 4,6 |
| 16 4 | 2 | 22,0 | 225 | 13,5 | 1.520 | 8,9 |
| | 3 | 28,5 | 276 | 16,5 | 2.550 | 6,5 |
| | 4 | 31,5 | 319 | 19,1 | 3.115 | 6,1 |
| | 5 | 35,5 | 357 | 21,4 | 3.957 | 5,4 |
| 18 4 | 3 | 29,0 | 350 | 21,0 | 2.640 | 7,9 |
| | 4 | 32,0 | 405 | 24,3 | 3.215 | 7,6 |
| | 5 | 34,0 | 452 | 27,1 | 3.629 | 7,4 |
| | 6 | 35,0 | 496 | 29,8 | 3.846 | 7,7 |

**DESCRIPTION:** Pop-Up sprinkler for large gardens and parks, manufactured with shock proof outer case and rubber cover. Technically built as a turbine big irrigun, it grant a long radius, and it is particulary suitable for golf courses and football grounds. Because the big diameter of pipe and sleeve, it do not mount filter (to avoid obstruction), and there is not water-passage throuch the gears. The external spinner and the jetbreaker, grant the best waterdistribution

| Code | Description |
|---|---|
| AIR091 | SPORTGUN - F Ø 1”½ |

## SPRINKLERS FOR SPORT AREAS LVZR/RVR

NEW

**Description**:
These sprinklers are ideal for the use on sports fields with lawn or gravel surface, on hockey and soccer fields with an artificial lawn cover, on golf courses on the fairways as well as driving ranges, race tracks and riding arenas. With the RVR version it is also possible to have a cover of genuine natural lawn. All maintenance work including the dismantling of coils and decoders is possible from the top, without excavation works. An excellent achievement by the specialists

| | Press. bar | Nozzle mm | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 | | 8 | | 9 | | 10 | | 11 | | 12 | | 13 | | 14 | | 15 | | 17,5 |
| | | m³/h | **m** | m³/h | **m** | m³/h | **m** | m³/h | **m** | m³/h | **m** | m³/h | **m** | m³/h | **m** | m³/h | **m** | m³/h | **m** | m³/h |
| LVZR 2 nozzles part circle | 3 | 4,6 | **19,0** | 5,7 | **19,5** | 6,8 | **20,0** | 7,9 | **20,5** | 8,8 | **21,0** | 10,0 | **21,5** | 11,2 | **22,0** | 12,7 | **22,5** | 14,1 | **23,0** | 17,0 |
| | 4 | 5,2 | **19,5** | 6,5 | **20,5** | 7,8 | **21,2** | 9,0 | **21,9** | 10,2 | **23,0** | 11,5 | **24,0** | 12,9 | **25,0** | 14,6 | **26,0** | 16,3 | **27,0** | 19,6 |
| | 5 | 5,8 | **20,6** | 7,2 | **21,5** | 8,7 | **22,4** | 10,0 | **23,3** | 11,3 | **24,8** | 12,8 | **26,5** | 14,4 | **27,5** | 16,3 | **29,0** | 18,1 | **30,0** | 21,8 |
| | 6 | 6,4 | **21,4** | 7,9 | **22,5** | 9,5 | **23,6** | 11,0 | **24,7** | 12,4 | **26,6** | 14,0 | **28,0** | 15,7 | **29,0** | 17,8 | **30,5** | 19,8 | **32,0** | 23,9 |
| | 7 | 6,8 | **21,9** | 8,5 | **23,3** | 10,0 | **24,7** | 11,8 | **26,1** | 13,3 | **27,9** | 15,1 | **29,4** | 16,9 | **30,5** | 19,2 | **32,0** | 21,4 | **33,5** | 25,8 |
| RVR 3 nozzles full circle | 3 | 5,6 | **19,0** | 6,7 | **19,5** | 7,8 | **20,0** | 8,9 | **20,5** | 9,8 | **21,0** | 11,0 | **21,5** | 12,2 | **22,0** | | | | | |
| | 4 | 6,3 | **19,5** | 7,6 | **20,5** | 8,9 | **21,2** | 10,1 | **21,9** | 11,3 | **23,0** | 12,6 | **24,0** | 14,0 | **25,0** | | | | | |
| | 5 | 7,1 | **20,6** | 8,5 | **21,5** | 10,0 | **22,4** | 11,3 | **23,3** | 12,6 | **24,8** | 14,1 | **26,5** | 15,7 | **27,5** | | | | | |
| | 6 | 7,9 | **21,4** | 9,4 | **22,5** | 11,0 | **23,6** | 12,5 | **24,7** | 13,9 | **26,6** | 15,5 | **28,0** | 17,2 | **29,0** | | | | | |
| | 7 | 8,3 | **21,9** | 10,1 | **23,3** | 11,8 | **24,7** | 13,4 | **26,1** | 14,9 | **27,9** | 16,7 | **29,4** | 18,5 | **30,5** | | | | | |

LVZR RVR

| Code | Model | Control | N° nozzles | Working area | Ø F. Connect. | Height mm | | Min pressure bar | Ø mm | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | body | pop-up | | surface | cover |
| OID024 | LVZR | Hydraulic | 2 | Part circle | 1"½ | 450 | 98 | 3 | 246 | 180 |
| OID020 | | Electric | | | | | | | | |
| OID025 | RVR | Hydraulic | 3 | Full circle | | 660 | 205 | | | 242 |
| OID018 | | Electric | | | | | | | | |

## SPRINKLERS FOR SPORT AREAS

NEW

| Pressure bar | Nozzle mm | | | | | |
|---|---|---|---|---|---|---|
| | 16 | | 20 | | 24 | |
| | m³/h | **m** | m³/h | **m** | m³/h | **m** |
| 4 | 25,9 | **34,0** | 36,1 | **40,0** | 48,7 | **42,0** |
| 5 | 29,0 | **37,0** | 40,4 | **42,0** | 54,4 | **44,0** |
| 6 | 31,7 | **40,0** | 44,3 | **45,0** | 59,6 | **49,0** |
| 7 | 34,3 | **42,0** | 47,9 | **48,0** | 64,4 | **52,0** |
| 8 | 36,7 | **44,0** | 51,2 | **50,0** | 68,9 | **54,0** |

VP3-KR VP3

**Description**:
The first large area pop-up sprinkler with a casting range of up to 54 m. Its new and compact water piston drive guarantees a precise, smooth and noiseless irrigation with infinite rotation speed regulation. A pop-up sprinkler which evenly irrigates large areas. This sprinkler is especially suitable for artificial turf pitches, e.g. hockey and football grounds. The sprinklers are installed outside the playing area. The VP3 is also suitable for natural lawn, e.g. for the installation on race tracks.

| Code | Model | Control | N° nozzles | Working area | Ø F. Connect. | Height mm | | Min pressure bar | Ø mm | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | body | pop-up | | surface | cover |
| OGR154 | VP3 | Electric• | 2 | Part circle | 1"½ | 450 | 98 | 3 | 246 | 180 |
| OGR155 | VP3-KR | | | | | | | | | |

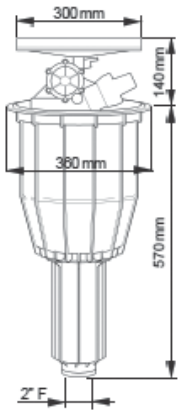
• On request hydraulic control

# SPRINKLER FOR SPORTS AREA IN SYNTETHIC PLAYGROUND

**DESCRIPTION:** POP-UP sprinkler for sportfields. Manufactured as a big irriguns, it allows a large radius of irrigation and can be used on sportfields for footballrugby-hockey-soccer - baseball.
The large radius allows the installation at the external of the fields, avoiding damages for players at the internal. It can work with high pressure for maximum distance. A special internal rubber folding top,avoids the passage of powder, sand and dirty water around the telescopic pipe.

| Ø nozzle mm | Press. kg/cm² | Range m | Flow rate l/min | Flow rate m³/h | Data for 1 sprinkler Superf. irr. m² | Data for 1 sprinkler Intensity mm/h |
|---|---|---|---|---|---|---|
| 16 6 | 3 | 29,5 | 314 | 18,8 | 2.732 | 6,8 |
| | 4 | 32,5 | 364 | 21,8 | 3.316 | 6,6 |
| | 5 | 35,0 | 406 | 24,4 | 3.846 | 6,3 |
| | 6 | 37,0 | 446 | 26,8 | 4.298 | 6,2 |
| | 7 | 39,0 | 482 | 28,9 | 4.775 | 6,0 |
| 18 6 | 3 | 31,0 | 350 | 21,0 | 3.017 | 6,9 |
| | 4 | 34,0 | 405 | 24,3 | 3.629 | 6,7 |
| | 5 | 37,0 | 452 | 27,1 | 4.298 | 6,3 |
| | 6 | 39,0 | 496 | 29,8 | 4.775 | 6,2 |
| | 7 | 40,5 | 535 | 32,1 | 5.150 | 6,2 |
| 20 6 | 4 | 35,0 | 545 | 32,7 | 3.846 | 8,5 |
| | 5 | 39,0 | 609 | 36,5 | 5.024 | 7,2 |
| | 6 | 43,0 | 668 | 40,1 | 5.805 | 6,9 |
| | 7 | 44,0 | 721 | 43,3 | 6.079 | 7,1 |
| | 8 | 45,0 | 773 | 46,4 | 6.358 | 7,3 |
| 22 6 | 4 | 36,0 | 649 | 38,9 | 4.069 | 9,5 |
| | 5 | 39,5 | 726 | 43,6 | 4.899 | 8,9 |
| | 6 | 44,0 | 795 | 47,7 | 6.079 | 7,8 |
| | 7 | 47,0 | 859 | 51,5 | 6.936 | 7,4 |
| | 8 | 48,0 | 920 | 55,2 | 7.234 | 7,1 |
| 24 6 | 4 | 37,0 | 765 | 45,9 | 4.298 | 10,6 |
| | 5 | 40,5 | 855 | 51,3 | 5.150 | 10,0 |
| | 6 | 45,0 | 937 | 56,2 | 6.358 | 8,8 |
| | 7 | 47,5 | 1.012 | 60,7 | 7.084 | 8,6 |
| | 8 | 48,5 | 1.084 | 65,0 | 7.386 | 8,8 |
| 26 6 | 4 | 38,0 | 891 | 53,4 | 4.534 | 11,7 |
| | 5 | 41,5 | 996 | 59,7 | 5.407 | 11,0 |
| | 6 | 46,0 | 1.092 | 65,5 | 6.664 | 9,8 |
| | 7 | 48,5 | 1.178 | 70,6 | 7.386 | 9,6 |
| | 8 | 50,0 | 1.262 | 75,7 | 7.850 | 9,6 |

**PLAYGROUND POP-UP**




NEW

**FLEXY NON POP-UP**

| Code | Name | Working | Female thread |
|---|---|---|---|
| AIR093 | PLAYGROUND | POP-UP | 2” |
| AIR105 | FLEXY | NON POP-UP | |

# RAIN BIRD EAGLE 900/950 SERIES SPRINKLERS

**DESCRIPTION: operating pressure** 4,1 ÷ 6,9 bar ● **flow rate** 4,43 ÷ 13,49 m³/h ● **radius** EAGLE **900** 19,2 ÷ 29,6 m - radius EAGLE **950** 21,3 ÷ 28 m ● nozzle outlet trajectory 25° ● max stream height: 6,1 m ● ACME female thread 1"½ ● **solenoid** 24 Vca - 50 hz ● inrush current 0,41 A (9,9 VA) ● holding current 0,30 A (7,2 VA) ● **size** height: 34 cm – pop-up height: 8,3 cm –top diameter : 21 cm

| Code | Description |
|---|---|
| OID816 | EAGLE 900 full circle performance |
| OID817 | EAGLE 950 part circle performance |

Rubber and artificial grass cover kit

**EAGLE 900 SERIES full circle performance**

| Press. | Nozzle | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 44 | | 48 | | 52 | | 56 | | 60 | | 64 | |
| bar | m³/h | Rad.m | m³/h | Rad.m | m³/h | Rad.m | m³/h | Rad.m | m³/h | Rad.m | m³/h | Rad.m |
| 4,1 | 4,8 | 19,2 | 6,5 | 22,3 | 7,2 | 22,9 | 8,6 | 24,7 | - | | - | |
| 4,5 | 5,1 | 19,8 | 6,8 | | 7,5 | 23,5 | 8,9 | 25,0 | 9,4 | 26,2 | 10,3 | 27,4 |
| 5,0 | 5,4 | 20,7 | 7,2 | 22,4 | 8,0 | 24,2 | 9,4 | 25,5 | 10,0 | 26,8 | 10,9 | 27,9 |
| 5,5 | 5,5 | 21,6 | 7,7 | 22,8 | 8,4 | 24,7 | 9,8 | 25,9 | 10,5 | 27,7 | 11,5 | 28,3 |
| 6,0 | 5,9 | | 7,8 | 23,3 | 8,8 | | 10,3 | 26,3 | 11,0 | | 12,0 | 28,8 |
| 6,5 | 6,1 | 21,9 | 8,0 | 23,5 | 9,1 | 24,9 | 10,8 | 26,8 | 11,5 | | 12,5 | 29,2 |
| 6,9 | 6,3 | 22,3 | 8,2 | | 9,4 | 25,3 | 11,1 | 27,1 | 11,8 | | 12,9 | 29,6 |

**EAGLE 950 SERIES part circle performance**

| Press. | Nozzle | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 18-C | | 20-C | | 22-C | | 24-C | | 26 | | 28 | | 30 | | 32 | |
| bar | m³/h | Rad.m | m³/h | Rad.m | m³/h | Rad.m | m³/h | Rad.m | m³/h | Rad.m | m³/h | Rad.m | m³/h | Rad.m | m³/h | Rad.m |
| 4,1 | 4,4 | 21,3 | 5,2 | 21,9 | 6,0 | 22,6 | 7,0 | 23,2 | 8,1 | 23,8 | - | - | - | - | - | - |
| 4,5 | 4,6 | 21,7 | 5,4 | 22,3 | 6,2 | 22,9 | 7,3 | 23,8 | 8,5 | 24,4 | 9,4 | 25,2 | 10,4 | 25,2 | 11,1 | 25,3 |
| 5,0 | 4,9 | 22,1 | 5,8 | 22,7 | 6,6 | 23,5 | 7,7 | 24,7 | 8,9 | 25,1 | 10,0 | 25,8 | 10,9 | 25,8 | 11,6 | 25,7 |
| 5,5 | 5,1 | 22,5 | 6,1 | 23,2 | 7,0 | 24,4 | 8,1 | 25,6 | 9,4 | 25,6 | 10,7 | 26,2 | 11,4 | 26,2 | 12,0 | 25,9 |
| 6,0 | 5,4 | 22,8 | 6,4 | 23,6 | 7,3 | 24,8 | 8,5 | 26,5 | 9,7 | 26,0 | 10,9 | 26,9 | 11,8 | 27,1 | 12,4 | 26,6 |
| 6,5 | 5,6 | 23,0 | 6,6 | 24,0 | 7,6 | 25,3 | 8,9 | 27,1 | 10,1 | 26,5 | 11,3 | 27,4 | 12,3 | 27,7 | 13,0 | 27,3 |
| 6,9 | 5,8 | 23,2 | 6,9 | 24,4 | 7,8 | 25,6 | 9,2 | 27,4 | 10,6 | 26,8 | 11,8 | 27,7 | 12,6 | 28,0 | 13,4 | 28,0 |

# SPRIKLER TS90 FOR SPORTING AEREA

For big open spaces, the Toro TS90 provides unparalleled features and performance into a single fully adjustable rotor. Designed for large turf areas, its radius of 53' to 95' is ideal for parks, sports fields, synthetic turf athletic fields and horse arenas. In addition, Toro patented Trujectory allows for the fine tuning of nozzle spray height from 7-30° to ensure wind resistance and head-to head spacing.

**Radius:** 53'-95' (16 - 29 m) - **Flow:** 14.0-61.5 GPM (53 - 233 LPM) - **Trajectory**: 7°-30° - **Arc:** Part/Full circle in one - **Recommended Operating Pressure:** 40-100 PSI (2.8 - 6.9 BAR) - **Inlet:** 1" (2.5 cm) - **Pop-Up Height:** 4" (10.2 cm) - **Body Height:** 10" (25.4 cm) - **Exposed Diameter:** 2.2" (5.6 cm)

TS90

TS90 with Kit miniGRILLO

| Code | Description |
|---|---|
| OID045 | Pop up 83 mm with set of 9 nozzles |
| OAC011 | Stabilizer to put on sprinkler TS90 located out of the soccer field |
| OID047 | Kit mini GRILLO for natural grass. To apply to sprinklers TS90 located inside soccer field |
| OID046 | Kit mini GRILLO per synthetic grass o for Live system (included synthetic grass).<br>To apply to the sprinklers TS90, located inside the soccer field |

**TECHNICAL DATA IN METRIC VALUE**

| Press. | Type of stator | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Short | | | | | | | | Medium | | | | | | | | Tall | |
| | Nozzle | | | | | | | | | | | | | | | | | |
| | Princ. | Sec. | Princ. | Sec. | Princ. | Sec. | Princ. | Sec. | Princ. | Sec. | Princ. | Sec. | Princ. | Sec. | Princ. | Sec. | Princ. | Sec. |
| | Yellow | Blue | Blue | Red | Brown | Orange | Orange | Orange | Green | Blue | Grey | Blue | Black | Orange | Red | Blue | Beige | Blue |
| bar | l/m | Range m | l/m | Range m | l/m | Range m | l/m | Range m | l/m | Range m | l/m | Range m | l/m | Range m | l/m | Range m | l/m | Range m |
| 3,4 | 53 | 16,2 | 71 | 16,8 | 78 | 16,5 | 105 | 21,0 | 112 | 21,0 | 118 | 21,9 | 132 | 21,6 | 145 | 22,3 | 165 | 22,9 |
| 4,1 | 58 | 16,5 | 77 | 18,0 | 86 | 17,4 | 114 | 21,9 | 123 | 22,3 | 130 | 23,2 | 144 | 23,8 | 159 | 23,8 | 180 | 24,7 |
| 4,8 | 62 | 16,8 | 84 | 18,6 | 93 | 18,3 | 124 | 22,6 | 133 | 23,8 | 140 | 24,7 | 156 | 24,1 | 171 | 25,3 | 195 | 25,3 |
| 5,5 | 66 | 16,8 | 89 | 18,0 | 99 | 18,6 | 133 | 24,4 | 143 | 24,1 | 150 | 25,0 | 165 | 24,4 | 184 | 26,2 | 208 | 25,9 |
| 6,2 | 70 | 16,5 | 95 | 18,0 | 105 | 19,2 | 140 | 24,7 | 151 | 25,0 | 159 | 26,2 | 175 | 26,5 | 195 | 26,8 | 221 | 27,7 |
| 6,9 | 74 | 17,1 | 99 | 18,9 | 110 | 20,7 | 147 | 25,0 | 158 | 25,6 | 167 | 26,5 | 184 | 25,6 | 205 | 26,8 | 233 | 29,0 |

# SPRIKLER 690 SERIES E SC690 SERIES FOR SPORTING AEREA

**Description**: two standard configurations of pre-calibration of the pressure to the nozzles to ensure the optimal functioning of the sprinklers even when subjected to high pressures 5.5 and 6.9 bar (80 PSI and 100) (only for models with valve control electric). Three different configurations in order to kind of built-in valve suitable for many applications: a command electrical, hydraulic control N.A. and restraint Check-O-Matic. Manual control of the sprinkler, Open-Close-Automatic (models with electric drive). Discharge valve incorporated in the atmosphere: it minimizes the differential pressure required for the correct adjusting pressure and ensures a positive closing of the valve. resistant mechanism of rotation turbine. All internal components are accessible from the top of the sprinkler with the simple removal of the elastic ring Servi-Snap. Wide range of nozzles available. Construction of durable Cycolac and stainless steel.

690 SERIES

| PERFORMANCE DATA | | | | | | |
|---|---|---|---|---|---|---|
| Pressure bar | Ug. Type 90 | | Ug. Type 91 | | Ug. Type 92 | |
| | gitt.m | l/m | gitt.m | l/m | gitt.m | l/m |
| 5,5 | 26,5 | 193 | 29,3 | 232 | 30,5 | 280 |
| 6,9 | 27,4 | 216 | 30,5 | 278 | 32,9 | 311 |

**Technical features**: threaded connection to the network 1“½ (NPT) - Assortment of seven angles fixed working: 90 °, 150 °, 165 °, 180 °, 210 °, 360 ° ● Available versions full circle, 2 speeds: 60 ° x 120 ° (120 ° at standard speed; 60th at half speed) • 180 ° x 180 ° (180 ° to speed standard; 180 ° at half-speed) ● Covers sprinkler in rubber, optional: Parts No.: 690-01 ● dimensions: Height: 405 mm. II two-speed model offers an economic alternative in areas that do not overlap and allows at the same time soak in a balanced way.

SC690 SERIES

The SC 690 is not exposed on the surface parts rigid, these being overtopped by a basket containing soft Neoprene topsoil normally covered with grass: for carry out its functions, the sprinkler internal and the basket that surmounts it is ousted, via a hydraulic mechanism lifting, only at the appropriate time and so as to bring the set of three nozzles which is fitted at the same level

| 690 Series | | |
|---|---|---|
| Code | Description | |
| OID054 | Working angle 90° | Hydraulic valve N.A. |
| OID055 | | Check valve |
| OID056 | | Electric valve 24 V. |
| OID057 | Working angle 180° | Hydraulic valve N.A. |
| OID058 | | Check valve |
| OID059 | | Electric valve 24 V. |
| OID060 | Working angle 360° | Hydraulic valve N.A. |
| OID061 | | Check valve |
| OID062 | | Electric valve 24 V. |
| **SC690 Series** | | |
| OGR003 | Sprinkler with hydraulic valve open incorporated | |
| OGR004 | Sprinkler with electric valve 24 v incorporated | |

# SPRINKLER 855 SERIES FOR SPORTS AREA

| Code | Description |
|---|---|
| OID744 | Angle of work adjustable - Valve idr. N.A. |
| OID745 | Angle of work adjustable - Valve |
| OID743 | Angle of work adjustable - Valve elect. 24 V |

**For more technical info contact our Technical Department**

The 855S Series sprinklers with TruJectory. Simply adjust the trajectory of the spray from 7 to 30 degrees and get better head-to-head coverage. Plus there’s part- and full circle operation in one sprinkler.
• Available in 1 ½” (3.8 cm) inlet (855S) • TruJectory Adjustment of the main nozzle – 24 positions from 7°- 30° • Arc Adjustment – 40 - 330° and true full-circle in one • The Industries Largest and Most Flexible Nozzle Selection.
**Radius:** 42’-100’ (12.8 - 30.5 m) - **Flow:** 7.1-61.1 GPM (27 - 231 LPM) - **Precipitation Rate**: 835S: Min = 0.37”/hr (0.9 cm); Max = 0.53”/hr (1.3 cm) 855S: Min = 0.43”/hr (1.1 cm); Max = .60”/hr (1.5 cm) - **Trajectory:** 7°-30° - **Arc:** Full Circle; Part-circle Adjustable; Part/Full circle in One - 40° - 330° and 360° - **Recommended Operating Pressure:** 65-100 PSI (4.5 - 6.9 BAR) - **Maximum Operating Pressure:** 150 PSI (10.3 cm) - **Minimum Operating Pressure:** 40 PSI (2.8 BAR) - **Inrush:** 60 Hz, 0.12 Amps - **Holding:** 60 Hz, 0.10 Amps - **Inlet:** 1” (2.5 cm) and 1 ½” (3.8 cm) NPT, BSP, Acme - **Pop-Up Height:** 3”¼ (8.3 cm) - **Body Height:** 855S: 11 ⅜” (28.9 cm) - **Body Diameter:** 855S: 7 ½” (19.1 cm) - **Weight:** 855S: 3.70 lbs. (1.7 kg).

## ► SELF-PROPELLED MACHINES FOR IRRIGATION

# IRRIGATION MACHINE FOR GREEN AREAS

The machine rewinds the hose while irrigating. It works with a variable inlet pressure from 1,5 bar min. to 6 bar max. (got from water system, submer-ged pumps, and so on...). The rewinding speed is adjustable in order to distribute the right quantity of water on the field. Automatic water stop atend of irrigation. Compact dimensions, optimum weight balancing on wheels.
The drawbar is thought to be hooked to small grass-cutters tractors. Easy and economical maintenance. No experience is required for intallation and use. Patented hydraulic rewinding cylinder and micro-filter on cylin-der water supply. Pressure gauge for inlet pressure. Sector-type sprinkler with a set of nozzles. PFA6 BD polyethylene hose. Endless-screwhoseguide for a perfect hose rewinding. Rail-chair mounted sprinkler; variable track wheeled trolley on request. Detailed instruction manual.

| Code | Model | Pipe Ø mm | Pipe Meter | Details |
|---|---|---|---|---|
| OIR045 | SR 300 | 32 | 90 | With accessories |
| OIR046 | SR 404 | 40 | 130 | With piston and accessories |
| OIR047 | SR 405 | 40 | 130 | With turbin and accessories |
| OIR048 | SR 505 | 50 | 170 | With turbin and accessories |

**With slide**

**With cart**

**With turbine**

**With piston**

**Closing water**

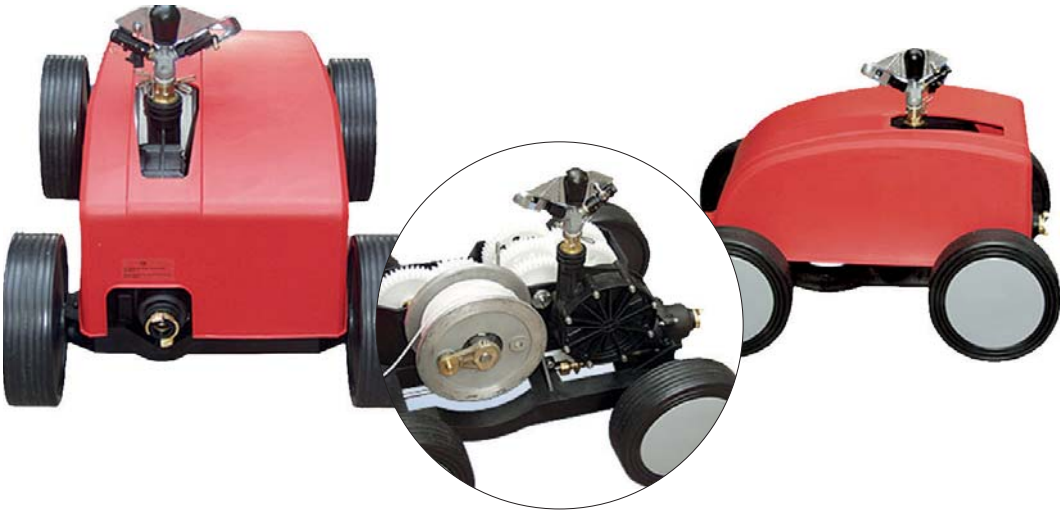
| Model | Pipe mt | Pipe Ø mm | Nozzle mm | Pressure To the machine bar | Pressure To the sprinkler bar | Flow rate l/sec | Flow rate m³/h | Air calm Sprinkler jet m | Air calm Irrigated strip m | Air calm 85° Recommend m | Rewinding speed m/h 10 / Rewinding time h 9,0 mm/$H_2O$ | 15 / 6,0 | 20 / 4,5 | 25 / 3,6 | 30 / 3,0 | 40 / 2,3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SR 300 | 90 | 32 | 6 | 2,0 | 1,5 | 0,47 | 1,69 | 13,0 | 26 | 22,1 | 7,6 | 5,1 | 3,8 | 3,0 | 2,5 | 1,9 |
| | | | | 2,7 | 2,0 | 0,53 | 1,91 | 14,5 | 29 | 24,7 | 7,8 | 5,2 | 3,9 | 3,1 | 2,6 | 2,0 |
| | | | | 5,2 | 4,0 | 0,75 | 2,70 | 17,5 | 35 | 29,8 | 9,1 | 6,1 | 4,5 | 3,6 | 3,0 | 2,3 |
| | | | 7 | 2,4 | 1,5 | 0,62 | 2,23 | 14,0 | 28 | 23,8 | 9,3 | 6,2 | 4,6 | 3,7 | 3,1 | 2,3 |
| | | | | 3,1 | 2,0 | 0,70 | 2,52 | 15,0 | 30 | 25,5 | 9,9 | 6,6 | 4,9 | 4,0 | 3,3 | 2,5 |
| | | | | 6,1 | 4,0 | 1,00 | 3,60 | 18,5 | 37 | 31,5 | 11,4 | 7,6 | 5,7 | 4,6 | 3,8 | 2,9 |
| SR 404 | 130 | 40 | 8 | 1,9 | 1,5 | 0,82 | 2,95 | 15,5 | 31 | 26,4 | 11,2 | 7,5 | 5,6 | 4,5 | 3,7 | 2,8 |
| | | | | 2,5 | 2,0 | 0,95 | 3,42 | 17,0 | 34 | 28,9 | 11,8 | 7,9 | 5,9 | 4,7 | 3,9 | 3,0 |
| | | | | 5,0 | 4,0 | 1,33 | 4,79 | 20,5 | 41 | 34,9 | 13,8 | 9,2 | 6,9 | 5,5 | 4,6 | 3,5 |
| | | | 10 | 2,4 | 1,5 | 1,27 | 4,57 | 17,0 | 34 | 28,9 | 15,8 | 10,5 | 7,8 | 6,3 | 5,3 | 4,0 |
| | | | | 3,2 | 2,0 | 1,47 | 5,29 | 18,0 | 36 | 30,6 | 17,3 | 11,5 | 8,6 | 6,9 | 5,8 | 4,3 |
| | | | | 6,1 | 4,0 | 2,07 | 7,45 | 22,0 | 44 | 37,4 | 19,9 | 13,3 | 9,9 | 8,0 | 6,6 | 5,0 |
| SR 405 | 130 | 40 | 8 | 2,4 | 1,5 | 0,82 | 2,95 | 15,5 | 31 | 26,4 | 11,2 | 7,5 | 5,6 | 4,5 | 3,7 | 2,8 |
| | | | | 3,0 | 2,0 | 0,95 | 3,42 | 17,0 | 34 | 28,4 | 11,8 | 7,9 | 5,9 | 4,7 | 3,9 | 3,0 |
| | | | | 5,5 | 4,0 | 1,30 | 4,68 | 20,5 | 41 | 34,9 | 13,8 | 9,2 | 6,9 | 5,5 | 4,6 | 3,5 |
| | | | 10 | 2,9 | 1,5 | 1,27 | 4,57 | 17,0 | 34 | 28,9 | 15,8 | 10,5 | 7,8 | 6,3 | 5,3 | 4,0 |
| | | | | 3,7 | 2,0 | 1,47 | 5,29 | 18,0 | 36 | 30,6 | 17,3 | 11,5 | 8,6 | 6,9 | 5,8 | 4,3 |
| | | | | 6,6 | 4,0 | 2,07 | 7,45 | 22,0 | 44 | 37,4 | 19,9 | 13,3 | 9,9 | 8,0 | 6,6 | 5,0 |
| SR 505 | 170 | 50 | 10 | 3,0 | 2,0 | 1,47 | 5,29 | 18,0 | 36 | 30,6 | 17,3 | 11,5 | 8,6 | 6,9 | 5,8 | 4,3 |
| | | | | 4,2 | 3,0 | 1,78 | 6,41 | 20,5 | 41 | 34,9 | 18,4 | 12,3 | 9,1 | 7,4 | 6,1 | 4,6 |
| | | | | 5,4 | 4,0 | 2,07 | 7,45 | 22,0 | 44 | 37,4 | 19,9 | 13,3 | 9,9 | 8,0 | 6,6 | 5,0 |
| | | | 12 | 3,4 | 2,0 | 2,12 | 7,63 | 19,0 | 38 | 32,3 | 23,6 | 15,7 | 11,7 | 9,4 | 7,9 | 5,9 |
| | | | | 4,8 | 3,0 | 2,58 | 9,29 | 21,0 | 42 | 35,7 | 26,1 | 17,4 | 13,0 | 10,4 | 8,7 | 6,5 |
| | | | | 6,2 | 4,0 | 2,98 | 10,73 | 23,5 | 47 | 40,0 | 26,9 | 17,9 | 13,4 | 10,8 | 9,0 | 6,7 |

# IRRIWALKER

The Irriwalker is a system of mobile irrigation. Suitable for large turf areas or sports areas

benefits:

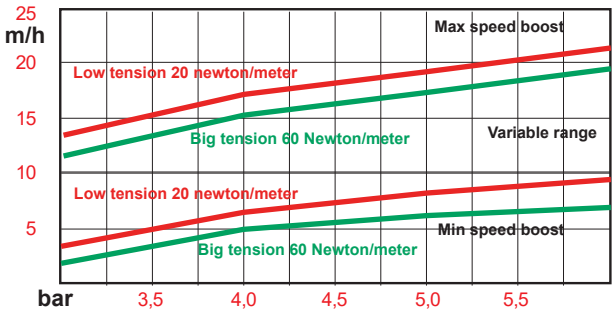
- The part circle sprinkler in the fields used to define the area to be irrigated
- Possibility of adjusting the water flow for each type of application
- The precise distribution of the sprinkler and the constant speed ensure a perfect distribution
- The internal gear at a very low coefficient of friction making the load losses and maintenance practically non-existent

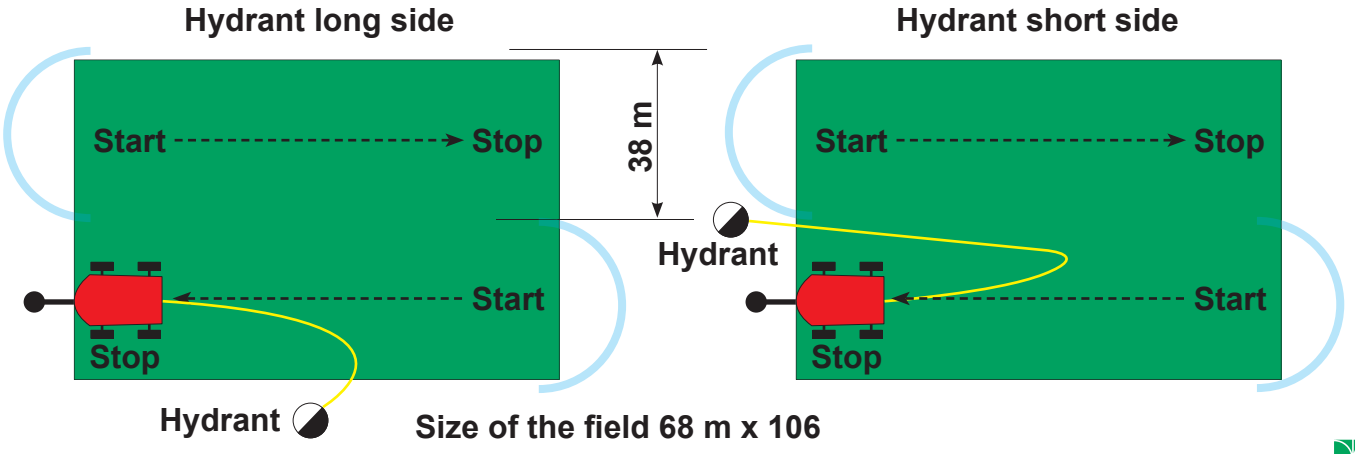


| Code |
|---|
| OIR002 |

| Technical data | |
|---|---|
| Working speed | 10 ÷ 20 m/h |
| Minimum working pressure | 3,5 bar |
| Flow | 3,0 m³/h |
| Width covered | 28 ÷ 36 m |
| Length covered | 120 m |
| Dimensions | 77 x 47 x 40 cm |
| Total weight | 33 kg |
| Sprinkler | Impact, nozzle 7 mm |
| Radius | 19 m a 4 bar at sprinkler |
| Precipitation | 6,5 ÷ 9 l/m, considering the speed |

**Connection between speed, pressure and tension**

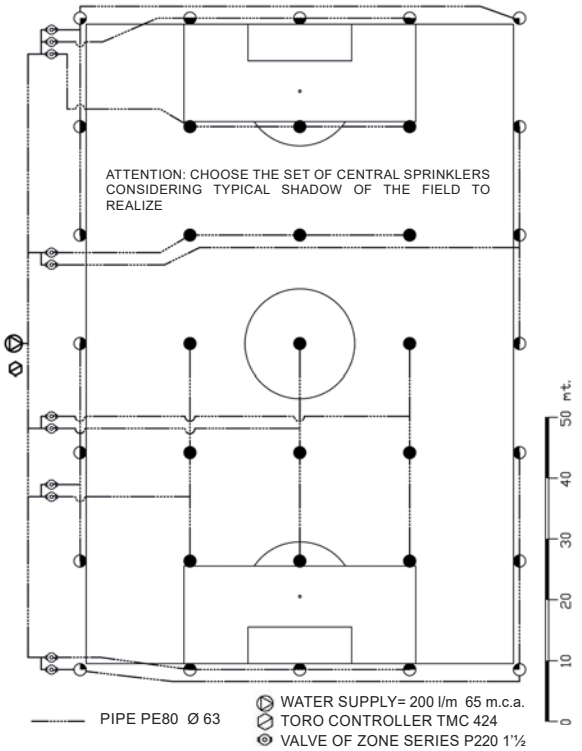


## ► GRASS AND SYNTHETIC SOCCER FIELD SCHEMES

### PROFESSIONAL GRASS SOCCER FIELD (mt. 70 X 105) ELECTRICAL CONTROL

with N° 35 sprinklers **8005 Series**

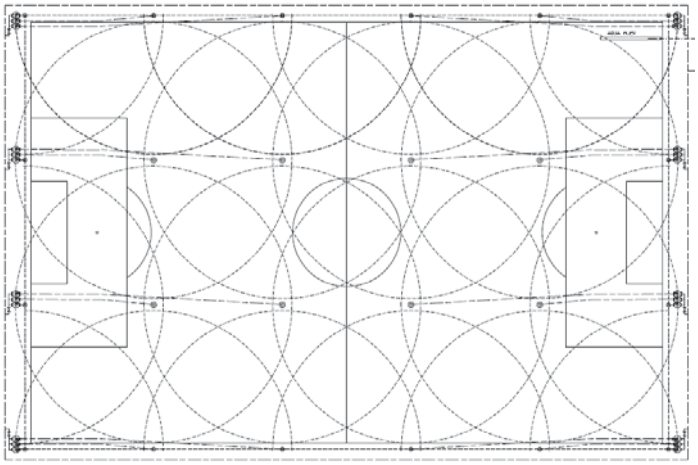



### LIVE GRASS OR SYNTHETIC SOCCER FIELD (mt. 70 X 105) ELECTRICAL CONTROL

with n°24 sprinklers
**TS90 Series STABILIZER AND TS90 MINI GRILLO or 8500 Series**

**TS90**

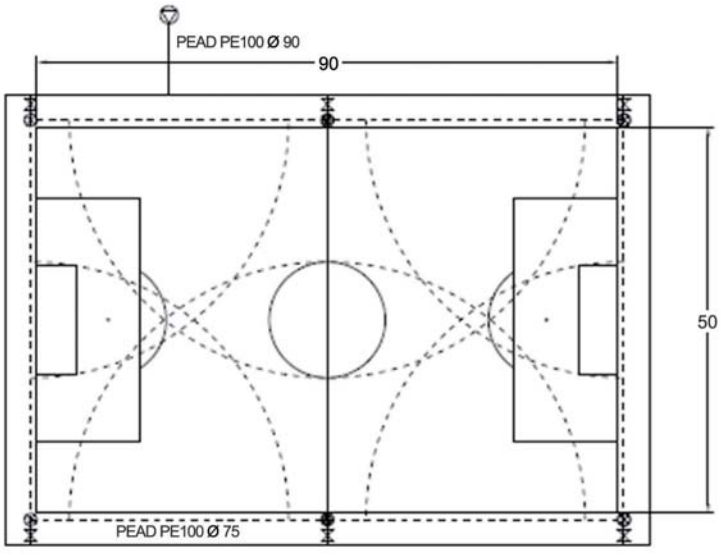
**TS90 VERSION MINI GRILLO**



### SYNTHETIC SOCCER FIELD (mt. 50 X 90) ELECTRICAL CONTROL

with sprinklers **SPORTGUN** Series

or **FLEXY** (above ground)

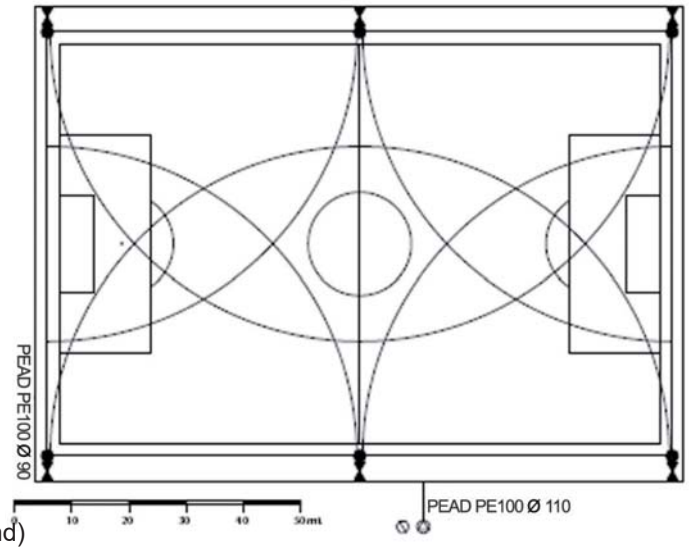



LEGEND
- ● Dynamic sprinkler SPORTGUN 180° nozzle 18
- ⊗ Dynamic sprinkler SPORTGUN 90° nozzle 18

## SYNTHETIC SOCCER FIELD (mt. 70 X 105) ELECTRICAL CONTROL

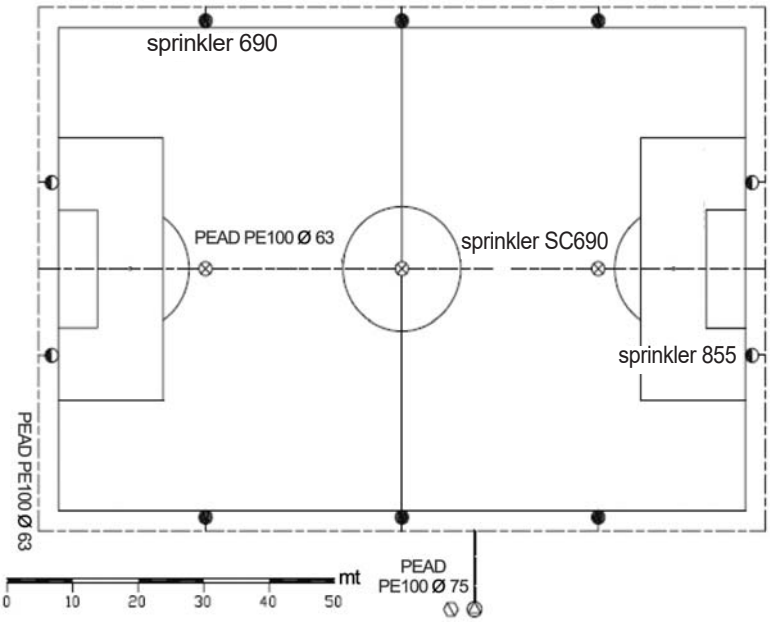
with sprinkler
**PLAYGROUND** (POP-UP)

or **FLEXY** (above ground)




## GRASS SOCCER FIELD (mt. 70 X 105) HYDRAULIC OR ELECTRIC CONTROL

with sprinkler **SC690** - **690** - **855** Series




**N.B.: list of materials used to realize those soccer fields is available on our website www.scarabelli.it**

# GARDEN FINISHING ELEMENTS

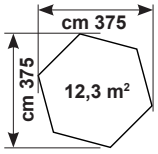
## ▶ WOODEN SWIMMING POOL

NEW

# ESAGONAL, OCTAGONAL, OVAL SERIES

When you choose a Wooden Swimming Pool (above ground, partially sunk or sunk), accessories, filtration and safety systems you are investing in lasting quality, that will give you hours of pleasure and fun together in the water. It manufactures innovative, robust products, devised to meet the needs of every customer. Its swimming pools are designed to withstand the test of time.

**Cement base**
**Min. thickness 10 cm**



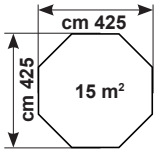

| 410 - ESAGONAL MODEL | | | | | | | |
|---|---|---|---|---|---|---|---|
| external size mt | height | volume | water surface | swim area | filtration | wood thickness | liner● |
| 3,75 x 3,75 | 1,20 m | 8,6 m³ | 12,3 m² | 8 m² | 6 m³/h | 45 mm | 75/100th |

● Liner blue color

Packaging mm: Pallet 1 = 2190 x 1120 x 710 - Pallet 2 = 120 x 50 x 70

Total weight = 700 kg

**Cement base**
**Min. thickness 10 cm**



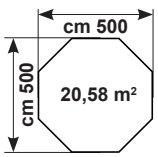

| 430 - OCTAGONAL MODEL | | | | | | | |
|---|---|---|---|---|---|---|---|
| external size mt | height | volume | water surface | swim area | filtration | wood thickness | liner● |
| 4,25 x 4,25 | 1,20 m | 11 m³ | 15 m² | 10,4 m² | 6 m³/h | 45 mm | 75/100th |

● Liner blue color

Packaging mm: Pallet 1 = 1800 x 1100 x 750 - Pallet 2 = 120 x 80 x 100

Total weight = 950 kg

**Cement base**
**Min. thickness 10 cm**



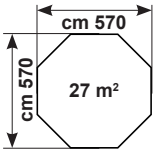

| 510 - OCTAGONAL MODEL | | | | | | | |
|---|---|---|---|---|---|---|---|
| external size mt | height | volume | water surface | swim area | filtration | wood thickness | liner● |
| 5,00 x 5,00 | 1,20 m | 15,7 m³ | 20,58 m² | 15 m² | 6 m³/h | 45 mm | 75/100th |

● Liner blue color

Packaging mm: Pallet 1 = 2140 x 1100 x 780 - Pallet 2 = 120 x 50 x 70

Total weight = 890 kg

**Cement base**
**Min. thickness 10 cm**



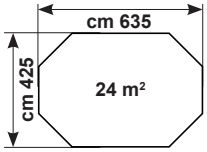

| 580 - OCTAGONAL MODEL | | | | | | | |
|---|---|---|---|---|---|---|---|
| external size mt | height | volume | water surface | swim area | filtration | wood thickness | liner• |
| 5,70 x 5,70 | 1,30 m | 23,8 m³ | 27 m² | 20,7 m² | 9 m³/h | 45 mm | 75/100th |

• Liner blue color

Packaging mm: Pallet 1 = 2400 x 1100 x 750 - Pallet 2 = 120 x 80 x 150

Total weight = 1300 kg

**Cement base**
**Min. thickness 20 cm**



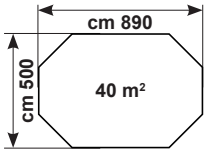

| 400x610 - OVAL MODEL | | | | | | | |
|---|---|---|---|---|---|---|---|
| external size mt | height | volume | water surface | swim area | filtration | wood thickness | liner• |
| 4,25 x 6,35 | 1,30 m | 20,8 m³ | 24 m² | 18,1 m² | 9 m³/h | 45 mm | 75/100th |

• Liner blue color

Packaging mm: Pallet 1 = 3900 x 1100 x 750 - Pallet 2 = 120 x 80 x 160

Total weight = 1250 kg

**Cement base**
**Min. thickness 20 cm**




| 470x860 - OVAL MODEL | | | | | | | |
|---|---|---|---|---|---|---|---|
| external size mt | height | volume | water surface | swim area | filtration | wood thickness | liner• |
| 5,00 x 8,90 | 1,30 m | 34,5 m³ | 40 m² | 30 m² | 9 m³/h | 45 mm | 75/100th |

• Liner blue color

Packaging mm: Pallet 1 = 6000 x 1100 x 510 - Pallet 2 = 120 x 80 x 160

Total weight = 1800 kg

## ACCESSORIES INCLUDED

| Every kit included | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | |
| Sand Filter | Wood external stairs | Steel internal stairs | Felt antibacterical 200gr/m² | Output with pvc pipes and valves | Felt for walls 170 gr/m²• | Joint in aluminum for corners•• |

• Only for OCTAGONAL and OVAL series

•• Only for OVAL series

## ▶ FLOORING WOOD

NEW

| Decking | | | |
|---|---|---|---|
| Description | | Pic. | Code |
| Ipè biologic class 1 | Tickness 19 mm x width 90 mm | A | IPE1990 |
| | Tickness 19/20/21 mm x width 140 / 145 mm | | IPE19140 |
| Teak - (Birmania-Indonesia) classe biologica 1 | Tickness 19 mm x width 90 mm | B | TEAK1990 |
| | Tickness 19 mm x width 120 mm | | TEAK19120 |
| Quadrotta ipè | Tickness 30 mm - width 500 x 500 mm | C | |

A

B

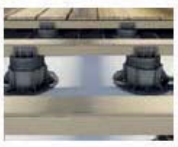
C

| Floating understructure solution A<br>Aluminium joist can be used with or without clips | |
|---|---|
| Description | Code |
| Fix stand EH 12 mm | SUP030 |
| Fix stand EH 15 mm | SUP031 |
| Fix stand EH 12 mm | SUP032 |
| Alluminium joist for clip 60x25 – length 2ml | TRA001 |
| Sliding clips with stainless steel screws | CLIP001 |

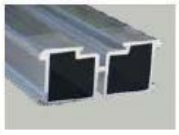
**Note: this application allow free flow water**

| Floating understructure solution B<br>Aluminium or wood joist can be used with application of adjustable stand | |
|---|---|
| Description | |
| Adjustable stand NM 1 25 – 40 mm | Head choice● |
| Adjustable stand NM 2 40 – 70 mm | |
| Adjustable stand NM 3 60 – 100 mm | |
| Adjustable stand NM 4 90 – 160 mm | |
| Adjustable stand NM 5 150 – 270 mm | |
| Livellatore in gomma LGH2 - LGH3 | |
| Adjustable key | |
| Alluminiun Joist for clip – 60 x 25 – length 2ml | |
| Clip scorrevole con vite in acciaio inox | |
| Joist in exotic wood 38 x 70 mm – length 3 ml | |

● **during the order specify the kind of structure**



| Floating understructure solution C | |
|---|---|
| Description | Code |
| Joist in exotic wood 38 x 70 mm – length 3 ml | TRA002 |
| Joist in exotic wood 60 x 25 mm – length 2 ml | TRA001 |
| Fix stand EH 12 mm | SUP032 |



## ► STRUCTURAL ELEMENTS

# EDGE IN ALLUMINIUM

The RITE-EDGE is manufactured in Aluminium Alloy 6063 to a T6 hardness whilst the fixing stakes are Aluminium Alloy 6061 to a T6 hardness.
This is designed with a life expectancy of 27 years in a hot and humid environment such as Florida.
We recommend 5cm (2") of overlap for each joint which should be considered in your length required calculation.

| | | | | | Pack | | |
|---|---|---|---|---|---|---|---|
| Code | Product | Width (mt.) | Thickness (mm.) | High (cm.) | Qty | Dimensions (cm) | Weight (Kg) |
| OKTLE003 | Natura Alluminium | 2,438 | 3,0 | 10,2 | 14 | 11.5x16.5x254 | 20,5 |
| OKTLE004 | Brown Alluminium | | | | | | |
| OKTLE005 | Green Alluminium | | | | | | |
| OKTLE006 | Black Alluminium | | | | | | |
| OKTLE009 | Natural Heavy-Duty 14 cm | | 4,5 | 14,2 | 10 | | 36,2 |

Each slab has two stakes

# STABLE EDGE

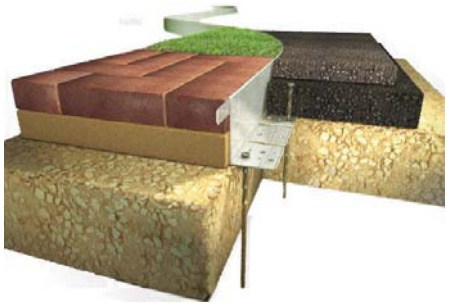
Stable Edge is the ultimate edge restraint for hard landscape surfaces. A heavy duty 'L' shaped section suitable for use with a variety of materials including asphalt, loose or resin bounded gravel, block paving and many more. It is the first choice in landscape edgings for specifiers and contractors due to its versatility, strength, speed of installation and cost effectiveness.

### APPLICATIONS

- Asphalt
- Wetpour and other safety surfacing
- Self binding gravel
- Resin bound and loose gravel
- Blocks & pavers
- Concrete
- Resin bonded surfacing

### PRODUCT FEATURES

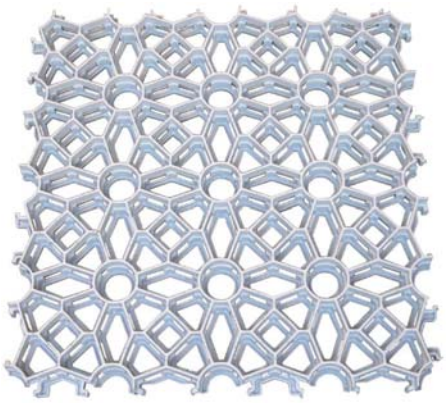
- Durable Extruded Aluminium 6063 Alloy
- Shaped section for added strength
- Strong, but flexible with high retaining properties
- Quick and simple joining system
- Maintains a crisp, clean defined edge
- Will Not Rust
- Available in a variety of depths
- Creates beautifully smooth curves

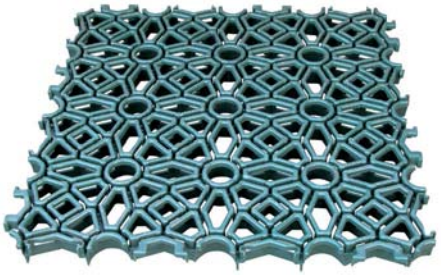


| Code | Product | Pieces in box n° | Box (mt) | Lenght (mt) | Thickness (mm) | Height (cm) | Base (cm) | Min radius (cm) | Weight (Kg) |
|---|---|---|---|---|---|---|---|---|---|
| OKTL012 | Cordolo | 28 | 68,26 | 2,438 | 5 | 2,5 | 5,0 | 56,0 | 29,5 |
| OKTL013 | | 22 | 53,64 | | | 3,8 | | | 28,5 |
| OKTL014 | | 19 | 46,32 | | | 5,0 | | | |
| OKTL015 | | 17 | 41,45 | | | 6,4 | | | |
| OKTL016 | | 13 | 31,69 | | | 7,5 | 7,5 | 81,5 | 29,5 |
| OKTL017 | | 10 | 24,38 | | | 10,0 | 10,0 | | 27,6 |
| OKTL018 | Picchetti | 250 | | 0,255 | | | | | 22,7 |

Each piece has three stakes

## MODÌ WALKABLE GRATING



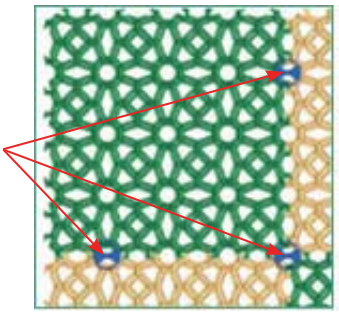


Characteristics:

- size: 580 x 580 x 40 mm;
- load capacity: 187 Ton/mq certified;
- the two opposed different shaping faces allow the use of the grating on different surfaces;
- quick application (approximately 120 sq per hour);
- free assembly;
- components cab be assembled in a square way, offset or one above the other, vertical or horizontal;
- thanks to the lock system, every single grating can be moved and repositioned;
- thanks to couplings and vertical ribs form is flexible and resistant;
- the reserve of water (lt/m2 1,5) distributed on all the element surface, can be doubled making up a double grating layer, thereby increasing the ground layer until 6 cm;
- thanks to large slots situated in the grating, size until 27 x 15 with transversal longitudinal light and aerobic function, roots spreading in horizontal way and around the grating so the grass growth is guaranteed homogeneously. Moreover, in order to obtain a high drainage quality, water is distributed gradually to avoid the stagnation ;
- thanks to the rounded angles , both sides are slip-resistant to allow walking;
- various accessories included as warning plugs and locking rings for a stable and single profile, in order to obtain an excellent flexibility and stability, more pieces together.

| | | Clamping ring | |
|---|---|---|---|
| Color | Grating | Upperside | Lower |
| GREEN | GCR001 | ABS001 | ABI001 |
| GREY• | GCR002 | ABS002 | ABI002 |
| BEIGE• | GCR003 | ABS003 | ABI003 |
| | | | |
| •Other colors available on request | | | |

**Warning plug**



| | Warning plug | |
|---|---|---|
| Color | Upperside | Lower |
| WHITE | TGS001 | TGI001 |
| GREY• | TGS002 | TGI003 |
| BLUE• | TGS004 | TGI005 |
| | | |

## ► MOSQUITO REPELLENT KIT

### WORKING PRINCIPLE

It is a system to inject biological control products such as the Bacillus Thuringiensis Israelensis. This bacterium produces toxic spores that are effective in killing mosquito larvae while having no effects on other organisms including man and pets. The system must be connected to the irrigation system already in place and must be activated periodically to carry out the treatment.
The mosquito life cycle varies considerably from one species to another.
Some mosquito females lay single eggs on the water surface or onto moist soil. Other species lay multiple eggs - up to a hundred or more each time - on the water surface. Generally the eggs hatch after approximately one day but those laid onto the soil hatch only when the soil has been flooded, and this may happen after months or even years after the eggs were laid. After the eggs have hatched, the larvae, which are invisible to the naked eye, go through four life stages before entering the pupal stage, which is followed two days later by the adult stage (male mosquitoes are usually the first to hatch out). In summer, the cycle from the egg to the adult mosquito can be completed in just 6 to 7 days. Males live for a week, while females can live up to a few months in summer and can lay as many as 1000-2000 eggs in this period (in 8 to 10 times).

### DOSAGE AND USAGE INSTRUCTIONS

Treatment with Bacillus Thuringiensis Israelensis products is recommended every 7 days at the dosage indicated on the label (to be adjusted according to the sqms of garden).
Dilute the product in water and pour the solution obtained into the plastic container supplied in the kit.

| Code | Tank liters |
|---|---|
| OKTS102 | 100 |
| OKTS100 | 300 |
| OKTS101 | 500 |
| MVR010 | Formulated with active ingredient Biolarkim ml. 50 |

### DESCRIPTION

The container of the larvae control solution is fitted with a dosing pump. The solution dispensing tube is visible in the upper part of said dosing pump.
This tube must be connected to the irrigation system.
The pump suctions the solution from the container through a tube with foot valve and level switch, which stops the pump if there is no solution inside the container. This is to avoid the pump running dry.

### ADJUSTMENTS

The dosing pump has two adjustment knobs.
The bigger knob in the centre allows varying the quantity of product injected at every stroke of the piston.
The smaller one on the right allows adjusting the frequency of strokes.
For a more accurate dosage, we recommend to adjust the big knob to low values and to turn the small knob to regulate the right dosing speed.
The optimal regulation is achieved if the product to be dispensed is finished in the time needed to supply the required irrigation to the garden portion under treatment. If the product finishes too early, reduce the frequency of strokes (small knob) and, if this isn't enough, reduce also the quantity of product injected at every stroke of the piston (big knob). The product shouldn't be excessively washed out and therefore its distribution should stop just few minutes from the end of the irrigation cycle on the garden portion being treated.

### MANUAL AND AUTOMATIC START-U

There is a three-position switch on the electric switch box: MAN-0-AUTO.
When in the MAN position, the dosing pump is started manually.
When in the AUTO position, the dosing pumps is started by the controller of the irrigation system to which it is connected.

To achieve the best result, it is recommended that, besides the SCARABELLI IRRIGATION KIT, you take the standard precautions against mosquitoes, such as removing standing waters, even small quantities, putting fragments of metallic copper (10 g. per litre) into any place where water stagnation is unavoidable (i.e. flowerpot saucers), carrying out regular cleaning, etc.

## ► REFRESHING NEBULIZING SYSTEMS

# PREMIUM SERIES THE LOW-PRICED PROFESSIONAL PUMPS

These professional high pressure pumps offer the best solution for small and medium misting systems with flow rates ranging from 0.6 up to 6 liters/min. driven by single-phase motors.
High quality components like ceramic pistons, brass head long lasting professional seals , ensure reliability and a long lasting operation.
These pumps are designed to build cheap misting systems installations, with same performances and quality standards of a heavy-duty professional high pressure pump.

| Code | Nozzles Ø 20 mm | Output l/m | Watt |
|---|---|---|---|
| ONF502 | 4 ÷ 7 | 0,6 | 440 |
| ONF503 | 8 ÷ 12 | 1,0 | 550 |
| ONF504 | 15 ÷ 25 | 2,0 | 680 |
| ONF505 | 30 ÷ 40 | 3,0 | 815 |
| ONF506 | 40 ÷ 50 | 4,0 | 900 |
| ONF507 | 50 ÷ 75 | 6,0 | 1.250 |

**N.B: other models with different performance are available on request**

**TECHNICAL FEATURES**

- professional high pressure pump
- operating pressure: 70 bar
- 3 ceramic pistons, brass head
- pressure regulating valve, built-in by pass,
- glycerine filled pressure gauge
- in line mounted solenoid valve 230V-50Hz
- industrial electrical motor with thermal overload 230V 1450 RPM, 2.2 HP air cooled
- ON-OFF switch
- pressure switch to prevent dry running
- weather proof painted steel cover and frame
- antivibrating rubber feet
- noise level: 60 dB(A) (average)
- manufactured in compliance with CE regulations

# FOG SYSTEMS KIT

A complete set of accessories suitable to build a professional misting pipeline.
A pump unit is required to install a full working system.

| Type | Code | Nozzles | Fans |
|---|---|---|---|
| Kit Polyamide line | ONF578 | 10 | - |
| | ONF579 | 20 | - |
| | ONF580 | 30 | - |
| | ONF581 | 50 | - |
| | ONF582 | 70 | - |
| Kit Noxide line (copper) | ONF583 | 10 | - |
| | ONF584 | 20 | - |
| | ONF585 | 30 | - |
| | ONF586 | 50 | - |
| | ONF587 | 70 | - |
| Kit Premium Vento | ONF588 | 8 | 2 |
| | ONF589 | 16 | 4 |
| | ONF590 | 24 | 6 |
| | ONF591 | 32 | 8 |
| | ONF592 | 40 | 10 |

# GARDEN FINISHING ELEMENTS

| COMPONENTS PRESENT IN ALL KIT | |
|---|---|
| Water filters complete with accessories | |
| Nozzle drain valve | |
| Tubing cutter | |
| ⅜” nylon tubing in coil form 25 mt | |
| Fitting for nozzle 10/24” | |
| 0.20 mm Brass/Stainless Nozzle | |
| Clamp for ⅜” tubing | |
| S.Steel nozzle plug 10/24 | |
| 25 micron polyethylene filter |  |

| SPECIFIC COMPONENTS OF EACH KIT | |
|---|---|
| **Kit Polyamide line** | |
| Brass union Elbow (⅜” x ⅜”) | |
| Brass union Tee (⅜” x ⅜” x ⅜”) | |
| Fitting for nozzle 10/24” | |
| **Kit Noxide line (copper)** | |
| Union – female connector (⅜” x ¼”) | |
| Male connector for ⅜” tube | |
| ⅜” Copper pipe: 80 cm. | |
| ⅜” Union; 1 hole - #10/24unc/2B | |
| Union Elbow (⅜” x ⅜”) | |
| Union Tee (⅜” x ⅜” x ⅜”) | |
| ⅜” Union End, with plug | |
| **Kit Premium Vento** | |
| 3 speed axial mist cooling fan - dia. 45 cm - roof mounting nonosclillating - mounting acces | |
| Misting ring 4 Holes | |
| ⅜” T Fitting | |
| ¼” male connector for ⅜” tube | |

| ACCESSORIES AND SPARE PARTS | | |
|---|---|---|
| Code | Description | |
| ONF232 | Cleanable nozzle Noxide/stainless steel 10/24” with valve anti drop hole 0,20 mm[1] | |
| [1] **Orifices available from 0,15 mm to 0,50 mm** | | |
| ONF314 | Anti-limestone - package of 1 lt[2] | |
| [2] **Other chemical product on request** | | |
| ONF313 | Filter’s cartridge 1 micron 20”[3] | |
| [3] **Other diametres and micron are available** | | |
| ONF317 | Kit filter ECONOMY with accesoires - 1x 5” ½ - 5 micron IN ¾F - OUT 10 mm[4] | |
| [4] **Filters 9” and 20” and antibacterial are available** | | |

## MOBI-COOL STAND-ALONE HIGH PRESSURE MISTING FAN

MOBI-COOL is a stand-alone, high-pressure, low-noise misting fan with cooling effect. Thanks to the built-in pressurization system, MOBI-COOL is capable of mixing atomized water to the airflow, thus producing a cooling effect all around.
Finally! Enjoy a cool summer also outdoor and without fixed installations. MOBI-COOL is really a special fan, quiet, effective, fully autonomous with a high capacity water tank that guarantees from 3 up to 5 hours of autonomy.
MOBI-COOL is quiet, its electrical QES motor an pump are noiseless, less than 55 DB noise emission, thanks to a low consumption technology designed for applications in environments requiring low noise emissions.

| MOBI COOL 450 W - 70 BAR - 230V-50HZ | | | | |
|---|---|---|---|---|
| Code | Running time hours | Output l/m | nozzles | Ø nozzles mm |
| ONF610 | 3 | 0,31 | 4 | 0,20 |
| ONF611 | 5 | 0,18 | | 0,15 |

NEW

**TECNICHAL FEATURES**

- professional high pressure pump with aluminium head
- working pressure: 70 bar
- 3 heavy duty stainless steel pistons
- variable flow rate, built-in by-pass
- safety valve
- heavy duty industrial motor, 550 W self-ventilated
- thermal overload protection
- 60 liters (15.85 Gallons ) water tank
- OFF/FAN-ON/FAN AND MISTING ON switch
- electric float switch level controller to protect pump against dry running
- weight balanced, wheels and handle for easy displacement

**USES**

Gardens, parks, verandas, beaches, public places, bars, restaurants, hotels, swimming pools, sport events, parties, factories, wharehouses, shopping malls, discoteques, ceremonies, and any other area to be cooled.
Fill up the tank with clean fresh water, plug-in, switch on. In a while a fresh breeze will make your summer more pleasant.

**BPS**: all units are equipped with By-Pass System (built-in by-pass valve), recirculating the water inside the pump, preventing from pump overheat. Fog systems driven by BPS fog pumps do not require any drain valves to empty the pipe so that no water is wasted on the ground.

**QES**: units supplied with QES motors are peculiarly preferred in resorts, swimming pools, bars, restaurants, hotels, where noise may disturb your guests.

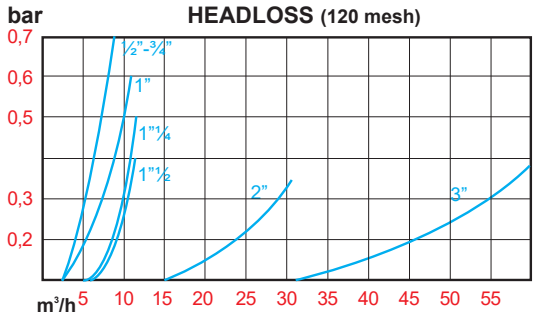
# FILTRATION

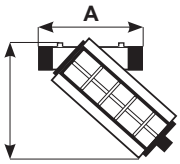
## ▶ MANUAL SCREEN FILTERS

### MANUAL POLYPROPYLENE SCREEN FILTERS

• trim in EPDM

| Code | Connection threated | Discharging | Connection threated 2 man. | Filtration cm² | Q max(m³/h) | Dimensions mm A | Dimensions mm B | Pmax bar |
|---|---|---|---|---|---|---|---|---|
| AFL120 | ½" | ¾" close | no | 73 | 5 | 124 | 120 | 12 |
| AFL121 | ¾" | | | | | | | |
| AFL122 | 1" | | | 113 | 6 | 170 | 131 | 10 |
| AFL123 | 1"¼ | | | 196 | 9 | 240 | 170 | |
| AFL124 | 1"½ | | | 291 | 10 | 240 | 222 | |
| AFL125 | 2" | ¾" open | ¼" F | 531 | 23 | 300 | 293 | 8 |
| AFL126 | 3" | 1" open | ¼" F | 913 | 46 | 415 | 358 | |



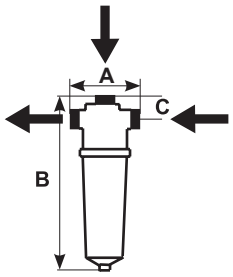




| FILTER ELEMENT | | | | |
|---|---|---|---|---|
| Code | Filter Øconn | Screen Ø mm | Screen width mm | Rete |
| AAC050 | ½"-¾" | 38 | 125 | Poli ammide |
| AAC051 | 1" | 50 | 150 | |
| AAC052 | 1"¼ | 70 | 148 | |
| AAC053 | 1"½ | 70 | 220 | |
| AAC054 | 2" | 107 | 286 | Doble screen inox |
| AAC055 | 3" | 145 | 329 | |

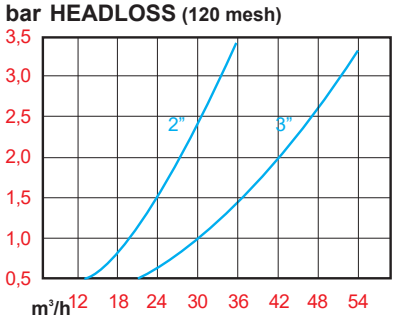
| MESH FILTRATION | | | | |
|---|---|---|---|---|
| Ø | Screen material Inox | Screen inox | Poliammide | Polyester |
| ½" - ¾" | 50 - 100 | - | 120● - 150 | - |
| 1" - 1"¼ - 1"½ | 50 - 80 - 100 | - | 120● - 150 | - |
| 2" - 3" | 32 - 50 - 80 - 100 | 80/32 - 100/32 - 120/32● - 150/32 - 200/32 | - | 120 - 150 |

● Standard

### MANUAL NYLON SCREEN FILTERS




• Max pressure 10 bar.
• Connection for manometers ø ¼".



| Code | Body | Conn. | Install. | Discharge ¾" | Filter | Q max(m³/h) | Dimensions mm A | Dimensions mm B | Dimensions mm C |
|---|---|---|---|---|---|---|---|---|---|
| AFL127 | Short | 2" | Line - angle | with cork | 770 | 40 | 300 | 595 | 106 |
| AFL128 | Long | | | | 1.150 | 48 | | 776 | |
| AFL129 | | 3" | | | | 60 | 310 | 776 | |

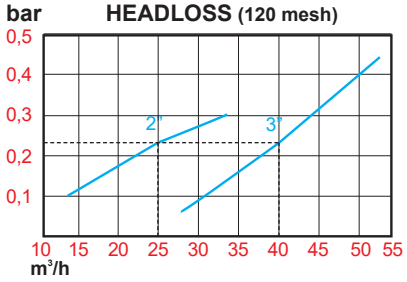
| Spare part screen 120 mesh● | | | |
|---|---|---|---|
| Code | Filter Ø conn | Screen Ømm | Screen Lenght mm |
| AAC056 | 2" short | 131 | 375 |
| AAC057 | 2" long - 3" | 131 | 556 |

| Mesh filtration | | |
|---|---|---|
| Ø | Screen material Inox | Screen inox |
| 2"C - 2"L - 3"L | 32 - 50 | 80/32 - 100/32 - 120/32● - 150/32 - 200/32 |

● Standard

## REINFORCED PP BODY STRAINERS WITH HANDLE

- operatin pressure max 10 bar
- connections for 2 manometers Ø ¼"
- clamp in stainless steel




## CLEANING FEATURES NO DISASSEMBLY:

- strainer cleaning has to be done when differential pressure, through the filtering net, reach 0.5kg/cm (7psi) or when the pressure decrease button red led is open;
- semi-automatic strainer cleaning has to be done while strainer is under pressure;
- open a bit the drain valve slowly;
- turn the handle up and down till to reach the correct position;
- close the valve gradually;
- if strainer is still clogged (pressure button up), please, repeat the above procedure while the foot valve strainer is closed.

**2"- M short**

| Code | Body | Thr. conn. | Install. | Bleed ¾" | Filt. sur. (cm²) | Q m³/h | $Q_{nom.}$ m³/h |
|---|---|---|---|---|---|---|---|
| AFL130 | Short-M | 2" | Line | With valve | 554 | 18 ÷ 27 | 25 |
| AFL131 | Long-M | 3" | | | 831 | 35 ÷ 42 | 40 |

| Available degree of filtration mesh | |
|---|---|
| Ø | Double mesh stainless steel |
| 2"CM - 3"LM | 120• - 130 |

• Standard

## "Y" NET GALVANIZED CHECK STRAINERS

**MATERIALS**
- sanded and galvanized steel body

**MAX PRESSURE**
- 8 bar

| METAL GALVANISED BODY "Y" SECURITY STRAINERS | | | |
|---|---|---|---|
| Code | Ø Connections | | $Q_{max}$ m³/h |
| AFL574 | DN80 | Flanged• | 50 |
| AFL575 | DN100 | | 80 |
| AFL576 | DN125 | | 110 |

• Also available threaded

# Y PATTERN FILTERS

Filters designed as manual cleaning filtration systems for low flows and as safety filtration systems. The “Y” pattern allows them to be placed on line with the pipe.

## EQUIPMENT FEATURES

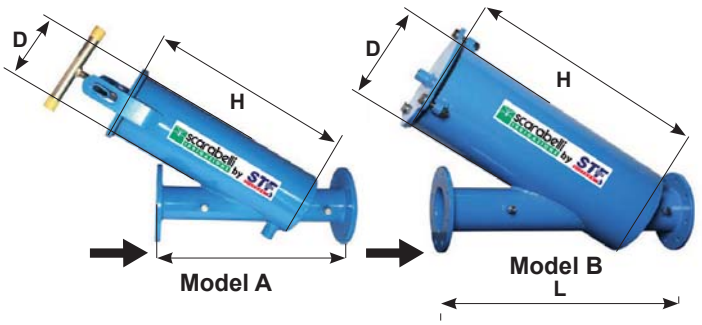
### CONSTRUCTION MATERIALS:

- Filter body: carbon steel (stainless steel under request)
- Screws: double chrome quality 5.6 and 5.8
- Drip cartridge: PVC support, screen of stainless steel AISI-316
- Sprinkler cartridge: stainless steel AISI-304
- Disc cartridge: Polypropylene

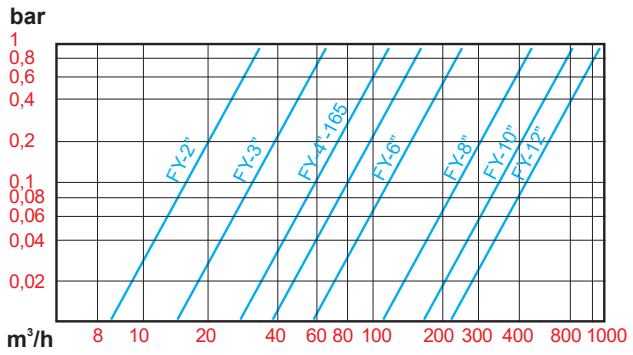
### SURFACE TREATMENT:

- Graned surface to a roughness of SA 2 ½
- Recovering with paint EPOXY-POLYESTER powder

**Maximum working pressure:** 10 bar
(For other options, consult)




**HEADLOSS (120 mesh)**




| Code | Model | Connections | Filtration (cm²) | Q max (m³/h) | Dimensions (mm) | | | Model | Weight (Kg) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | L | D | H | | |
| AFL600 | FY-2 | Thread 2” | 1.498 | 20 | 450 | 165 | 377 | A | 17 |
| AFL601 | FY-3 | Flange 3” | 2.004 | 40 | 495 | 165 | 502 | | 20 |
| AFL602 | FY-4-165 | Flange 4” | 2.960 | 80 | 695 | 165 | 749 | | 30 |
| AFL603 | FY-4-220 | Flange 4” | 3.120 | 100 | 695 | 220 | 659 | B | 32 |
| AFL604 | FY-5 | Flange 5” | 3.120 | 100 | 695 | 220 | 659 | | 35 |
| AFL605 | FY-6 | Flange 6” | 5.456 | 150 | 725 | 323 | 894 | | 62 |
| AFL606 | FY-8 | Flange 8” | 12.170 | 300 | 1.000 | 457 | 1.242 | | 94 |
| AFL607 | FY-10 | Flange 10” | 14.640 | 400 | 1.000 | 457 | 1.492 | | 125 |
| AFL608 | FY-12 | Flange 12” | 17.120 | 475 | 1.250 | 457 | 1.742 | | 161 |

# L PATTERN FILTER

Filters designed as manual cleaning filtration systems for low flows and as safety filtration systems. Up to 5” they are placed vertically and from 6” they are placed horizontally and named Pivot Filters.

## EQUIPMENT FEATURES

### CONSTRUCTION MATERIALS:

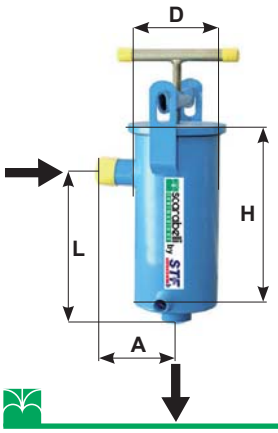
- Filter body: carbon steel (stainless steel under request)
- Screws: double chrome quality 5.6 and 5.8
- Drip cartridge: PVC support, screen of stainless steel AISI-316
- Sprinkler cartridge : stainless steel AISI-304
- Disc cartridge: Polypropylene

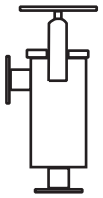
### COATING TREATMENT:

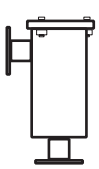
- Graned surface to a roughness of SA 2 ½
- Covering with paint EPOXI-POLIESTER Powder

**Maximum working pressure:** 10 bar (For other options, consult)

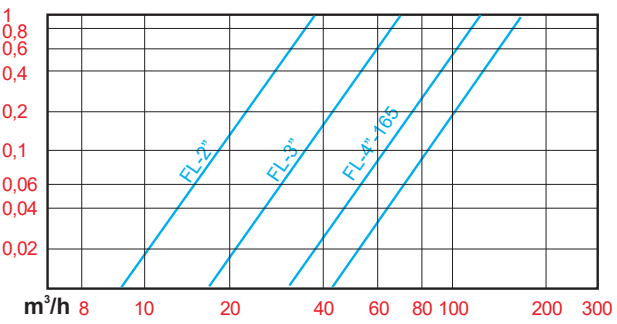
| Code | Model | Connections | Filtration (cm²) | Q max (m³/h) | Dimensions (mm) | | | | Model | Weight (Kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | A | L | D | H | | |
| AFL1830 | FL-2 | Thread 2” | 1.498 | 20 | 140 | 350 | 165 | 377 | A | 15 |
| AFL1831 | FL-3 | Flange 3” | 2.004 | 40 | 145 | 365 | 165 | 502 | | 18 |





Model A


Model B

**HEADLOSS (120 mesh)**



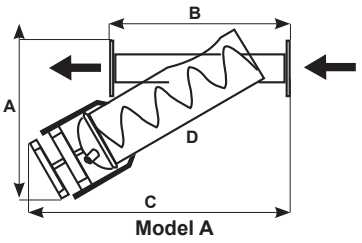
## Y PATTERN FILTERS WITH CYCLONIC EFFECT

Same characteristics as “Y” pattern but an helical effect produced at water inlet takes the dirt retained in the cartridge to the superior accumulator.
The cleaning could be manual with a ball valve or automatic with an electrovalve and programme.

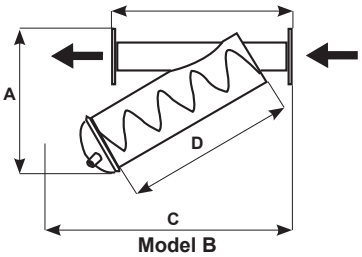
### EQUIPMENT FEATURES

**CONSTRUCTION MATERIALS:**

- Filter body: carbon steel (stainless steel under request).
- Screws: double chrome quality 5.6 and 5.8.
- Drip cartridge: PVC support, screen of stainless steel AISI-316.
- Sprinkler cartridge: stainless steel AISI-304.
- Graned surface to a roughness of SA 2 ½.
- Covering with paint EPOXI-POLIESTER Powder .
- 10 bar (For other options, consult).



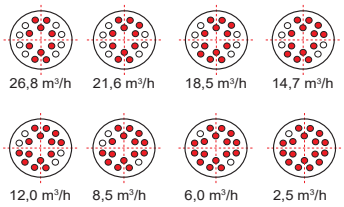
Model A



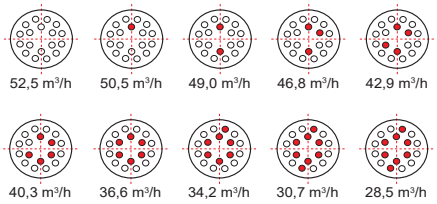
Model B

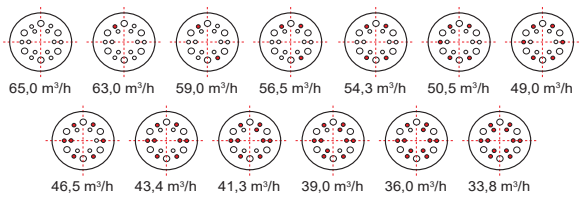
| Code | Model | Connection | Filtration ($cm^2$) | Dimensions (mm) | | | | Model | Weight (Kg) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | A | B | C | D | | |
| AFL630 | FY-2-CIC | 2” thread | 1.498 | 488 | 450 | 693 | 370 | A | 17 |
| AFL631 | FY-3-CIC | 3” flange | 2.004 | 583 | 495 | 837 | 495 | | 20 |
| AFL632 | FY-4-CIC | 4” flange | 3.120 | 672 | 695 | 1.004 | 653 | | 32 |
| AFL633 | FY-5-CIC | 5” flange | 3.120 | 672 | 695 | 1.004 | 653 | | 35 |
| AFL634 | FY-6-CIC | 6” flange | 5.456 | 938 | 725 | 1.003 | 888 | B | 62 |

## FLOW RATE

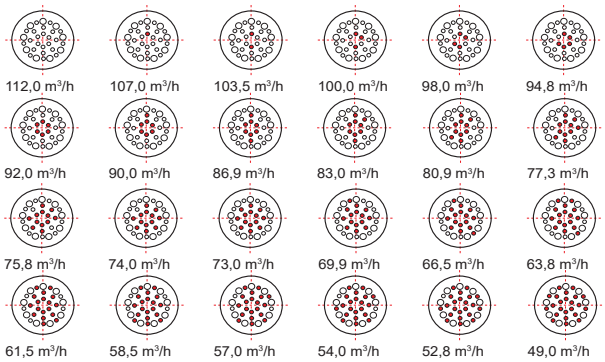



**FY - 3” - CIC**




**FY - 6” - CIC**



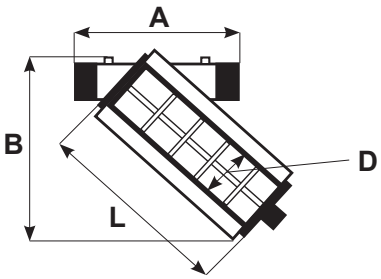
## ► MANUAL FILTERS

### DISK SWIVEL FILTERS TS SERIES●

| Code | Model | Flow rate (m³/h) | Flow rate (l/min) | Filtration (cm²) | PFA (bar) |
|---|---|---|---|---|---|
| AFL549 | ¾” | 3 | 50 | 96 | 7,8 |
| AFL550 | 1” | 5 | 83 | 96 | 7,8 |
| AFL551 | 1”½ | 12 | 200 | 552 | 9,8 |
| AFL552 | 2” | 20 | 333 | 670 | 9,8 |

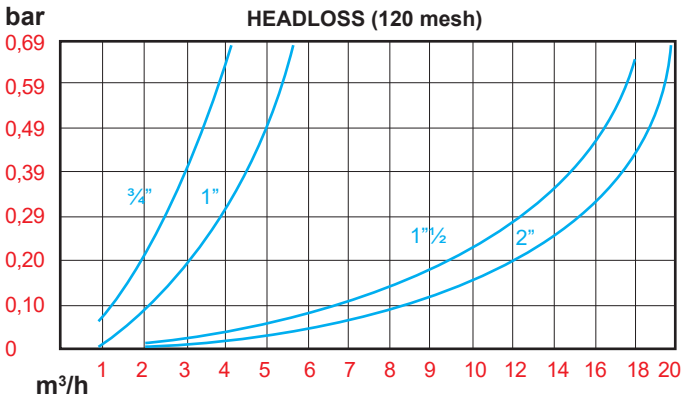
| DIMENSION MM | | | | |
|---|---|---|---|---|
| Type | A | B | L | D |
| ¾” - 1” | 121 | 160 | 153 | 31 |
| 1”½ | 257 | 240 | 220 | 80 |
| 2” | 257 | 270 | 265 | 80 |

| SPARE PART | |
|---|---|
| Code | Description |
| AAC001 | Spare disk o Ø ¾” ÷ 1” (80 ÷ 140 mesh) |
| AAC002 | Spare disk Ø 1”½ (80 ÷ 140 mesh) |
| AAC003 | Spare disk Ø 2” (80 ÷ 140 mesh) |




| FILTRATION | | | | |
|---|---|---|---|---|
| | | | | |
| Mesh | 40 | 80 | 120 | 140 |
| Micron | 400 | 200 | 130 | 100 |

● Available also threaded



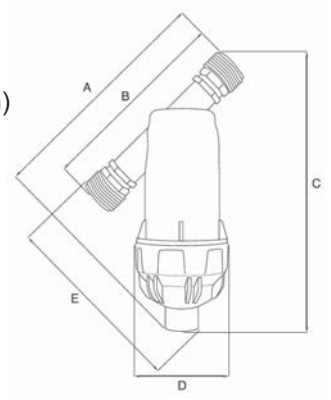

## DISK MALE THREATED FILTERS

**MATERIALS**
- body in thermoplastic material with high resistance
- filter discs in polypropylene
- Threaded closure with integrated O-ring

**MAXIMUM PRESSURE**
- 10 bar

**CONNECTIONS**
- Threaded

**FILTRATION**
- 120 mesh (130 micron)



| Code | Ø Connections | Dimensional characteristics A | B | C | D | E | Performance Characteristics Q max (m³/h) as a function of the solids in suspension ppm <50 | 50÷100 | 100÷150 | Filt. sur. cm² |
|---|---|---|---|---|---|---|---|---|---|---|
| | | mm | | | | | | | | |
| AFL145 | ¾” | 194,5 | 160 | 231 | 78 | - | 4,7 | 3,1 | 1,7 | 172 |
| AFL146 | 1” | 195,5 | | 234 | | | | | | 195 |
| AFL147 | 1”¼ | 265 | 243 | 311 | 108,5 | 210 | 12,0 | 8,5 | 6,6 | 297 |
| AFL148 | 1”½ | | | 314 | | | | | | 322 |

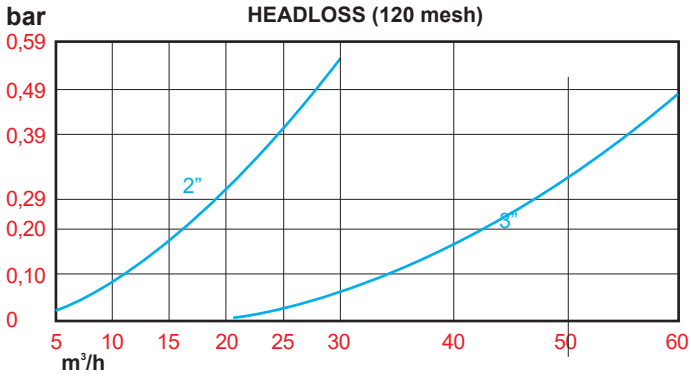
## DISK FILTERS MS SERIES

Projected with Helix system.

- Made of Polypropylene.
- Filtration 120 mesh.

| Code | Ø | Q max m³/h | P max m.c.a. | Connections line | Connections manometer | Discharging valve | L | W | A | B | Filtration (cm²) | Weight Kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AFL400 | 2” | 30 | 60 | filett. M | predisp. ¼” | ¾” | 63 | 34 | 17 | 15 | 1.200 | 5,5 |
| AFL401 | 3” | 50 | 60 | filett. M | predisp. ¼” | ¾” | 78 | 34 | 17 | 15 | 1.750 | 6,0 |

| SPARE PART | |
|---|---|
| Code | Description |
| AAC355 | Spare part screen Ø 2” |
| AAC356 | Spare part screen Ø 3” |




## DOUBLE BODY FILTER

Filter built with double cartdrige to improve the performance reducer frequency of wash operation.
The structure, built in fiber-reinforced polyamide give to the product long life and high performance and easy to install. Checking of the cartdridge possible thanks flanges quick release in steel Aisi 304.

**MATERIALS**
Boyd in polyamide.
Disks in polypropylene.
Closing in Aisi 304.

**MAX PRESSURE:** 8 bar.
**CONNECTION:** Threaded M or Victaulic.
**FILTRATION:**140 mesh (105 micron).

| Code | Description | Dimension | | | | Performance | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | H mm | h1 mm | D | d1 mm | Q max m³/h | P max bar | Filt. sur. cm² | Kg |
| AFLT429 | Double body 3” Thr./Thr. | 1.230 | 515 | 3”x3” | 185 | 60 | 8 | 3.696 | 14,5 |
| AFLT430 | Double body 4” Thr./Thr. | 1.230 | 515 | 4”x4” | 185 | 80 | 8 | 3.696 | 14,5 |

## SD DISC FILTERS

SD filters have a big filter surface realized in high quality plastic. They are very resistant to the chemical products such as fertilizers. They don't have any metallic components in contact with water. It is possible to remove filter element for washing. Washing system is manual but filters are prepared for automatic backwashing that is possible without loosen disc filters avoiding the passage of the dirty. The body has inox clamps very easy to open and close. It has manometers connections in and out and also connection for discharge.

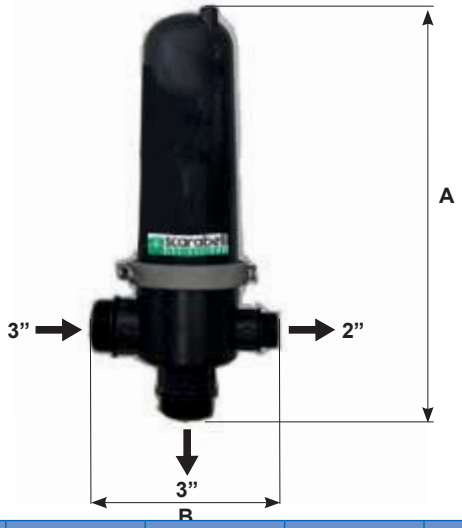
**MATERIALS**
- Body 2" in ABS special, Body 3" n.d., 3" double in nylon body in glass fiber
- Disc support in PP reinforced 25%
- Gasket in PDM
- Clamps in inox steel
- Disc in ABS

**THREAD**
- Male BPS 2" and 3"

**FILTRATION**
- 120 mesh

**PFA**
- 10 bar

**MAX FLOW RATE**
- 2" until 25 m³/h
- 3" until 40 m³/h
- 3" double body until 50 m³/h

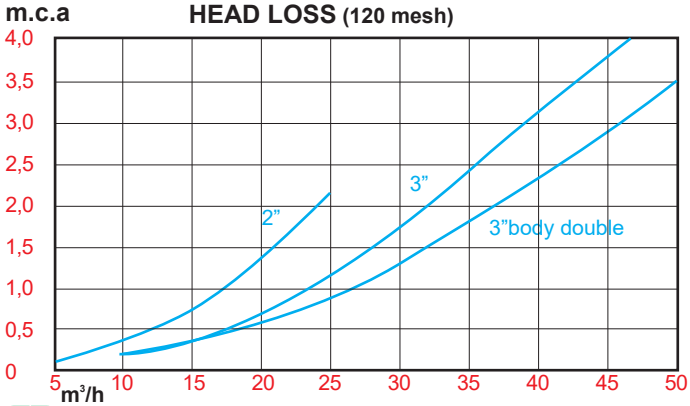


| Code | Body | Conn. Ø | Q max m³/h | PFA bar | Conn. line | Dimensions mm A | Dimensions mm B | Sur. filtr. (cm²) | Weight Kg |
|---|---|---|---|---|---|---|---|---|---|
| AFL420 | Singolo | 2" | 25 | 10 | filett. M BPS | 267 | 230 | 794 | 5,0 |
| AFL421 | | 3" | 40 | | | 645 | 305 | 1.347 | 8,0 |
| AFL422 | Doppio | | 50 | | | 665 | 245 | 1.589 | 8,5 |

CARTDRIGE

| Code | Color | Mesh |
|---|---|---|
| AAC255 | Blue | 120 |
| AAC256 | Red | 150 |
| AAC257 | Brown | 200 |

**m.c.a** **HEAD LOSS (120 mesh)**



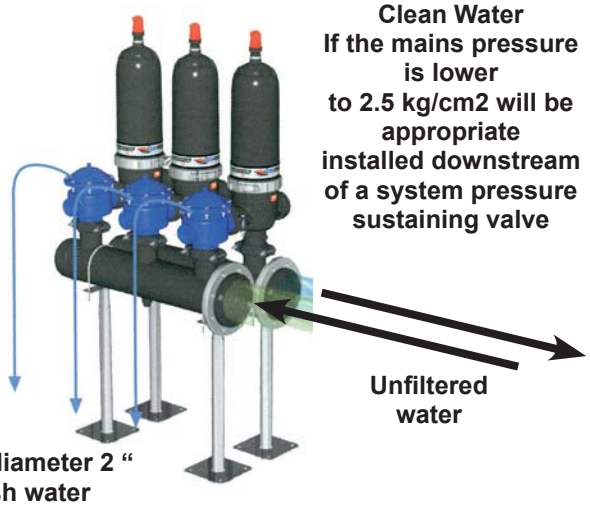

**DETAIL SURFACE OF DISC FILTER**

Disc filters being one over the other create filter cylinder. The serpentine is slightly inclined that allows and efficient automatic backwashing and it is not necessary loosen disc filters avoiding the passage of the dirty.

## ► MODULAR DISC FILTERS

### 200 AND 300 SERIES

**MATERIALS:** Housing in reinforced polyamide ● Polypropylene filter discs ● Quick stainless steel AISI 304.
**MAXIMUM PRESSURE:** 10 bar.
**FILTRATION:** 120 mesh - 130 micron.
**FEATURES:** Manifold inlet, outlet and drain HDPE ● Plastic or cast iron hydrovalves electrically activated with solenoid ● Air vent triple effect for each filter element ● Pressure gauges ● Control unit AC or DC (battery not included).




| 200 Series (cc aut.) | | | | | Qmax m³/h a 120 mesh | | |
|---|---|---|---|---|---|---|---|
| Code | N° elements Ø 2” | Ø manifold PEAD | Connection | | < 50 ppm• | 50 ÷ 100 ppm• | 100 ÷ 150 ppm• |
| AFL1025 | 1 | 63 | DN80 | Flanged | 33 | 22 | 11 |
| AFL1026 | 2 | 90 | | | 60 | 39 | 20 |
| AFL1027 | 3 | 110 | DN100 | | 90 | 59 | 29 |
| AFL1028 | 4 | | | | 120 | 78 | 39 |
| **200 Series (cc aut.)** | | | | | | | |
| Code | N° elements Ø 2” | Ø manifold PEAD | Connection | | Qmax m³/h | | |
| AFL1031 | 1 | 63 | DN80 | Flanged | 33 | 22 | 11 |
| AFL1032 | 2 | 90 | | | 60 | 39 | 20 |
| AFL1033 | 3 | 110 | DN100 | | 90 | 59 | 29 |
| AFL1034 | 4 | | | | 120 | 78 | 39 |
| **300 Series (cc aut.)** | | | | | | | |
| Code | N° elements Ø 3” | Ø manifold PEAD | Connection | | Qmax m³/h | | |
| AFL1040 | 2 | 110 | DN100 | Flanged | 63 | 42 | 21 |
| AFL1041 | 3 | 160 | DN150 | | 95 | 63 | 32 |
| AFL1042 | 4 | | | | 126 | 84 | 42 |
| **300 Series (cc aut.)** | | | | | | | |
| Code | N° elements Ø 3” | Ø manifold PEAD | Connection | | Qmax m³/h | | |
| AFL1048 | 2 | 110 | DN100 | Flanged | 63 | 42 | 21 |
| AFL1049 | 3 | 160 | DN150 | | 95 | 63 | 32 |
| AFL1050 | 4 | | | | 126 | 84 | 42 |

• ppm = parts per million of suspended solids

### WORKING POSITION

#### FILTERING POSITION

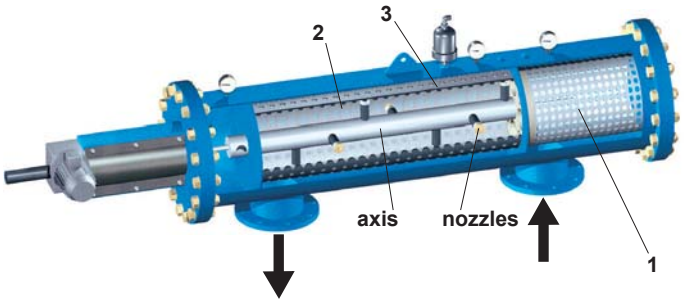
1. The piston compresses the discs in the cartridge, and keeps the filter in the filtering position
2. The non-return valve remains open allowing the passage of the filtered water in the network

#### POSITION OF CAR WASH

1. The selfcleaning the non-return valve closes and the water under pressure passes through the collector of cleaning in a tangential flow on the filter discs
2. Simultaneously, the upper piston is lifted by releasing the discs that move in a high-speed centrifugal movement that determines the cleaning of the same.

## ► STF AUTOMATIC STRAINERS

### AUTOMATIC STRAINERS FS SERIES




Strainer has three different chambers body: 1) a first one to retain the coarse particles with a filtering screen water flows through from outwards to inwards 2) the second chamber is the main filtering element, with the strainer water flows through from inwards to outwards 3) the third one is for cleaning, has a drain valve and it's separated from the second chamber.
Suction noozles system with brushes (in contact with the second chamber interior part using a spiraling motion) connected to the strainer axel that communicates with third chamber to expel the impurities. This system allows to waste a minimum water quantity during the strainer backwashing and, most of the case, doesn't affect the irrigation.
To support the strainer, we recommend to install: 1 a prefiltration to intercept voluminous materials 2 a check valve situated at the filtering sector output to avoid backflow or water hammer.
In case of operating low pressure, put a pressure sustaining valve to maintain a minimum 2 bar pressure inside the strainer.
Max capacity in the table, refers to capacity with 0.2 bar head loss.

| Water quality for operating capacity is related to the following characteristics: | | | |
|---|---|---|---|
| | Water quality | | |
| Parameter | high | medium | low |
| T.S.S.• in mg/l | < 50 | 50 ÷ 100 | >100 |

• Total Suspended Solids

### SF 100 HYDRAULIC

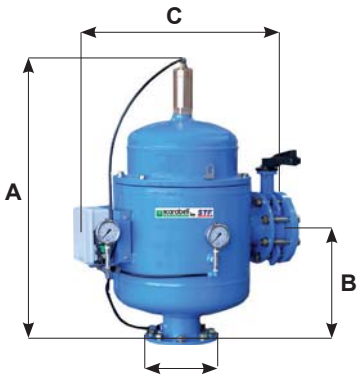
**MATERIALS**
- body of carbon steel
- screws in stainless steel AISI-304
- network of stainless steel AISI-316
- support of the filter cartridge of PVC

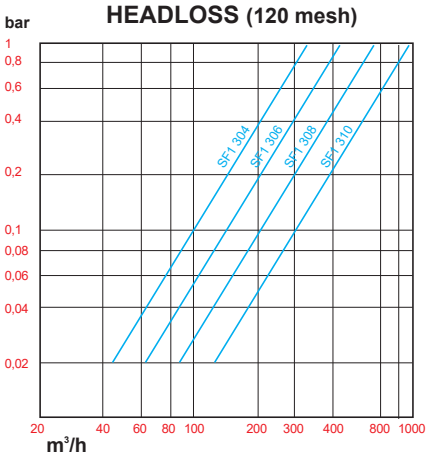
**SURFACE TREATMENT**
- sandblasting up to grade SA 2 ½
- epoxy-polyester powder paint

**UNIT BACKWASHING**
- batteries or AC power adapter

**DIRTY WATER DRAIN VALVE**
- 1 "threaded

**PRESSURE**
- 2 ÷ 10 bar




| Code | Model | Dimensions mm | | | | Filtering surface cm² | Weight Kg | $Q_{max}$ m³/h | Flow rate m³/h quality water | | | Cleaning lt/m |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | DN | | | | high | average | low | |
| AFL699 | SFI 102-A | 220 | 220 | 600 | 50 | 460 | 18 | 37 | 14 | 9 | 5 | 48 |
| AFL700 | SFI 103-A | 690 | 250 | 480 | 80 | 1.000 | 45 | 50 | 30 | 20 | 15 | 50 |
| AFL701 | SFI 104-A | 800 | 320 | 570 | 100 | 1.600 | 60 | 75 | 45 | 35 | 25 | 62 |
| AFL702 | SFI 106-A | 1.075 | 470 | 570 | 150 | 3.200 | 81 | 160 | 90 | 70 | 50 | 94 |

# SF 100 ECLECTRIC

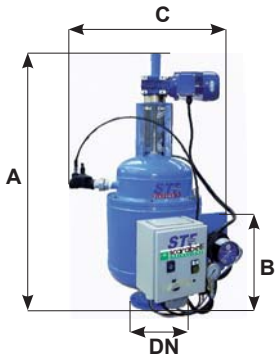
**MATERIALS**
- carbon steel housing
- joints and bolts bichromate, 5.6 and 5.8 quality
- AISI-316 s/screens
- PVC or s/s filtering cartridge support

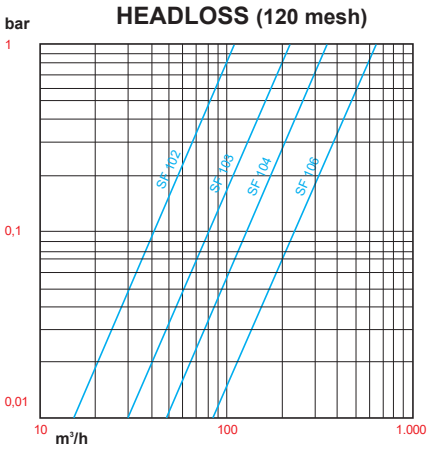
**SURFACE TREATMENT**
- sandblasting up to degree 2 ½
- epoxy-polyester powder coating

**ELECTRIC FEATURES:**
- single-phase operating voltage 230V 50hz
- control voltage 24V CC
- electrical motor 0,33 CV (230V)

**DIRTY WATER DRAIN VALVE**
- 1" threaded

**WORKING PRESSURE**
- 2 ÷ 10 bar - also available on request PFA16, PFA25 and more




**FILTERING DEGREES**
- 140 mesh standard, more on request

**SF 100 WITH CARTRIDGE PVC SUPPORT**

| Code | Model | Dimensions mm A | B | C | DN | Filtering surface cm² | Weight Kg | $Q_{max}$ m³/h | Flow rate m³/h quality water high | average | low | Cleaning lt/m |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AFL804 | SFI 102-E | 1.150 | 220 | 500 | 65 | 460 | 40 | 50 | 14 | 9 | 7 | 48 |
| AFL805 | SFI 103-E | 1.230 | 250 | 500 | 80 | 1.000 | 45 | 90 | 30 | 20 | 15 | 50 |
| AFL806 | SFI 104-E | 1.340 | 320 | 590 | 100 | 1.600 | 60 | 150 | 45 | 35 | 25 | 62 |
| AFL807 | SFI 106-E | 1.615 | 470 | 1.075 | 150 | 3.200 | 86 | 250 | 90 | 75 | 50 | 94 |

**SF 100 WITH CARTRIDGE STAINLESS STEEL SUPPORT**

| Code | Model | Dimensions mm A | B | C | DN | Filtering surface cm² | Weight Kg | $Q_{max}$ m³/h | Flow rate m³/h quality water high | average | low | Cleaning lt/m |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AFL800 | SFI 102-E | 1.150 | 220 | 500 | 65 | 711 | 42 | 70 | 20 | 15 | 10 | 48 |
| AFL801 | SFI 103-E | 1.230 | 250 | 500 | 80 | 1.400 | 52 | 140 | 40 | 28 | 20 | 50 |
| AFL802 | SFI 104-E | 1.340 | 320 | 590 | 100 | 2.200 | 67 | 200 | 60 | 48 | 34 | 62 |
| AFL803 | SFI 106-E | 1.615 | 470 | 1.075 | 150 | 4.390 | 88 | 350 | 120 | 100 | 70 | 94 |

• Data at ΔP 0,2 bar

# SUPPORTS SF 100 HYDRAULIC AND ELECTRIC FILTERS

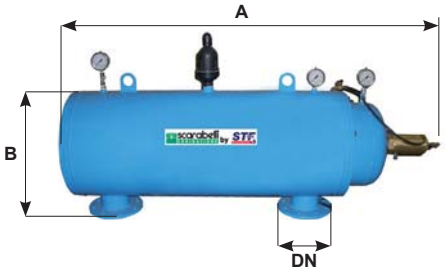
| Description | Ø | Treatment | Code | |
|---|---|---|---|---|
| Vertical adjustable supports | DN65-DN80 | Galvanized | FTLZ250 | |
| | DN100-DN150 | | FTLZ251 | |

# SF 300 HIDRAULIC

## EQUIPMENT FEATURES

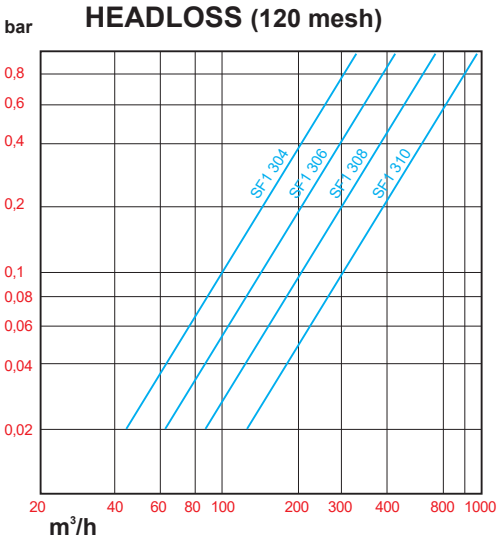
### CONSTRUCTION MATERIALS

- **Body filter:** Carbon steel (Other options: Stainless steel)
- **Screws:** stainless steel AISI-304
- Stainless steel screen AISI-316
- Filtering Cartridge support in PVC or in stainless steel




### SURFACE TREATMENT

- Graned surface to a roughness of SA 2 ½
- Covering with paint EPOXI-POLIESTER Powder
- **Controller with batteries for self-cleaning process**
- **Minimum working pressure:** 2,5 bar
- **Maximum working pressure:** 10 bar
- **Standard filtration degrees:** 125, 500, 1000 microns (For other options, consult)




| Code | Model | Dimension | | | Filtration | Q max | Flow rate m³/h quality water | | | Cleaning |
|---|---|---|---|---|---|---|---|---|---|---|
| | | A | B | DN | cm² | m³/h | high | average | low | lt/m |
| AFL705 | SFI 304 | 1.476 | 483 | 100 | 3.200 | 100 | 80 | 65 | 50 | 210 |
| AFL706 | SFI 306 | 1.751 | 483 | 150 | 4.800 | 150 | 130 | 100 | 75 | 315 |
| AFL707 | SFI 308 | 2.026 | 483 | 200 | 6.400 | 200 | 180 | 130 | 100 | 420 |
| AFL708 | SFI 310 | 2.301 | 483 | 250 | 8.000 | 310 | 250 | 180 | 130 | 525 |

# SF 200 ELECTRIC

Self cleaning electric filters, with last generation screen type REPS and 125 microns standard filtration degree. Our nozzles with brushes are in contact with the screen and the suction scanner has an spiral movement due to the electrical motor; as a result we get the most effective filter in the market.
The cartridge support is made of PVC or stainless steel. During the flushing process the water will continuously be filtered and will be flowing to the application system, assuring us a continuous working. Exists the possibility of grouping filters and be controlled by the same controller.

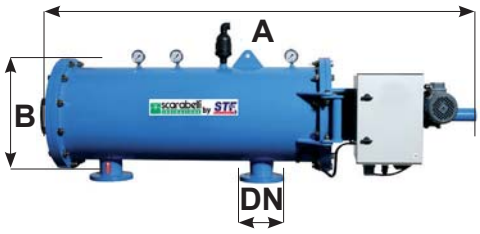
## EQUIPMENT FEATURES

### CONSTRUCTION MATERIALS:

- Filter body: Carbon steel (Other options: Stainless steel).
- Screws: double chrome, quality 5.6 et 5.8.
- Stainless steel screen AISI-316.
- Cartridge in PVC or in stainless steel.

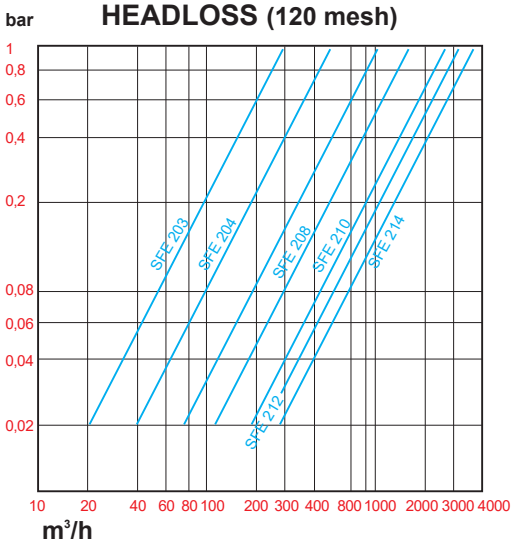
### SURFACE TREATMENT:

- Graned surface to a roughness of SA 2 ½
- Recovering with paint in EPOXI-POLIESTER powder.




**Operating voltage**:

- singlephase 220 v (50 Hz).
- **Electrical motor power ¼ CV.**
- **Control panel with screen display relay** (optionally PLC with touch screen, connection to SCADA system, etc.).
- **Minimum working pressure:** 2 barElectrical motor power.
- **Maximum working pressure:** 10 bar¼ CV Electrical motor.
- **Standard filtration degrees:** 20, 34, 63, 75, 100, 125, 200, 500, 1.000, 1.500, 2.000 and 2.500 microns (For other options, consult).
- **Optionally the filter may be manufactured for use solar energy, batteries, etc.**




| Code | Model | Dimensions | | | Filtration | Q max | Flow rate m³/h Quality water | | | Cleaning |
|---|---|---|---|---|---|---|---|---|---|---|
| | | A | B | DN | cm² | m³/h• | high | average | low | lt/m |
| AFL710 | SFE 203 | 1.625 | 554 | 80 | 2.200 | 95 | 60 | 48 | 34 | 84 |
| AFL711 | SFE 204 | 2.140 | | 100 | 4.390 | 235 | 110 | 90 | 70 | 168 |
| AFL712 | SFE 206 | 2.415 | | 150 | 6.900 | 450 | 215 | 173 | 129 | 252 |
| AFL713 | SFE 208 | 2.690 | | 200 | 9.400 | 700 | 320 | 256 | 192 | 336 |
| AFL714 | SFE 210 | 2.965 | | 250 | 11.900 | 1.150 | 580 | 464 | 348 | 420 |
| AFL715 | SFE 212 | 2.690 | 780 | 300 | 14.700 | 1.400 | 700 | 560 | 420 | 336 |
| AFL716 | SFE 214 | 2.965 | | 350 | 19.150 | 1.800 | 900 | 720 | 540 | 420 |

• Data corresponding to ΔP 0,2 bar

## SUPPORTS SF 30 HYDRAULIC FILTERS

| Description | Model | Treatment | Code | |
|---|---|---|---|---|
| Horizontal supports | 4” | Galvanized | FTLZ080 | |
| | 6” | | FTLZ081 | |
| | 8” ÷ 10” | Painted with 3-point attachment | FTL502 | |

## ► HYDROCYCLONES

## MINI-HYDROCYCLONE AND HYDROCYCLONE GALVANIZED OR PAINTED

Water, forced to enter tangentially in the separation cylinder, undergoes a considerable centrifugal force that pushes tangentially down the solids returning the clean water in the center. Solids, collected in a specific chamber, got discharged by the purging valve. Allows the use of water containing high percentage of suspended solids.

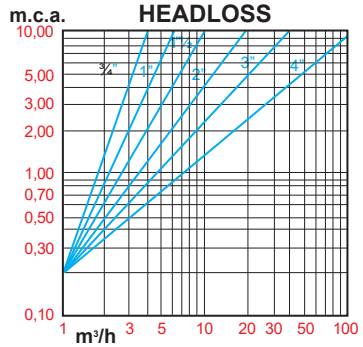
Mini-idrociclone Idrociclone 1863

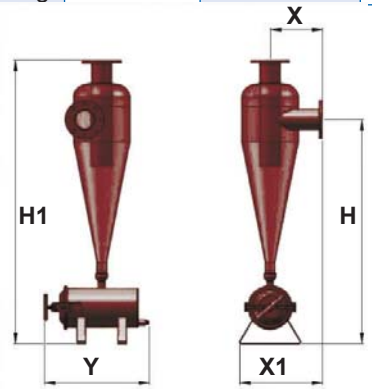
### MATERIALS
• Steel body.
• Debris collection chamber, with purge valve.

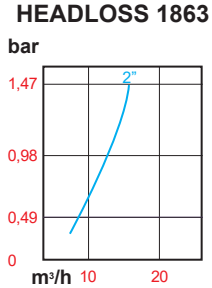
### SURFACES TREATMENT
• epoxy coated or galvanized.

### MAX PRESSURE
• 8 bar.

| Code Coated | Model | Ø mm | Connections | | Flow rate m³/h | DimensionS mm X | X1 | Y | H | H1 |
|---|---|---|---|---|---|---|---|---|---|---|
| AFL510 | Mini-hydrocyclone | 140 | ¾” | Female | 3 ÷ 5 | 130 | 240 | - | 650 | 740 |
| ALF511 | | | 1” | | 5 ÷ 19 | | | | 750 | 840 |
| AFL512 | | | 1”¼ | | 7 ÷ 12 | | | | | |
| AFL517 | Hydrocyclone | 168 | 1”½ | | 9 ÷ 15 | 150 | 300 | 300 | 650 | 760 |
| AFL1863 | | | 2” | Male | 9 ÷ 18 | 150 | 240 | 330 | 1.020 | 1.116 |
| AFL513 | | 219 | | Female | 14 ÷ 24 | 230 | 400 | 500 | 800 | 940 |
| AFL518 | | | 3” Flang. | Female or flanged | 27 ÷ 45 | | | | | |
| AFL514 | | 350 | | | 40 ÷ 60 | 275 | 510 | 600 | 1.060 | 1.250 |
| AFL523 | | 400 | | | 50 ÷ 70 | 300 | 500 | 650 | 1.100 | 1.300 |
| AFL515 | | | 4” Flang. | | 72 ÷ 80 | | | | 1.200 | 1.400 |



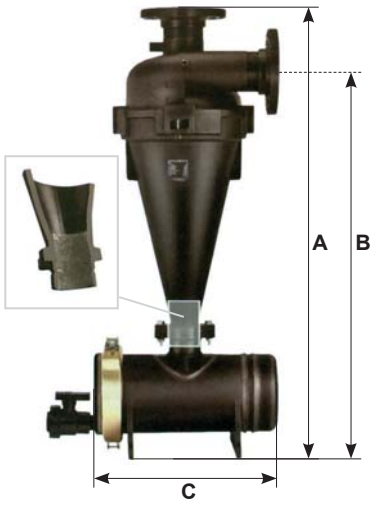



## HYDROCYCLONE IN POLYAMIDE S SERIES

**MATERIALS**
- Body in reinforced polyamide;
- Debris collection chamber, with purge valve.

**MAXIMUM PRESSURE**
- 7,8 bar.




| Code | Connect | Flow m³/h | Dimension mm A | B | C | Capacity lt tank | Weight Kg |
|---|---|---|---|---|---|---|---|
| AFL695 | 2" / 50 | 20 ÷ 28 | 894 | 762 | 395 | 8 | 7,2 |
| AFL696 | 2" / 65 | 28 ÷ 35 | | 770 | | | 7,3 |
| AFL697 | 3" / 80 | 35 ÷ 52 | 942 | 820 | | | 9,5 |

**HEADLOSS**

**Single S series fittings**

| Code | Description | Ø | |
|---|---|---|---|
| RFG200 | Threaded flange | 2" | |
| RFG201 | | 2"½ | |
| RFG202 | | 3" | |
| RGO222 | Threaded elbow | 2" | |
| RGO223 | | 2"½ | |
| RGO224 | | 3" | |
| FMO030 | Glycerin pressure gauge | ¼" | |
| FVI322 | Single effect air release | 1" | |
| FSV030 | Flowcontrol gate valve | 2" | |
| FSV031 | | 3" | |

**Assembled S series fittings with connections kit Venturi**

| Code | Description | Ø | |
|---|---|---|---|
| FCL010 | 1 flange assembled threaded manfold | 2" | |
| FCL011 | | 3" | |
| OIV021 | Hydrocycle fittings set | 2" | |
| OIV023 | | 3" | |

**Composition fittings assembled**

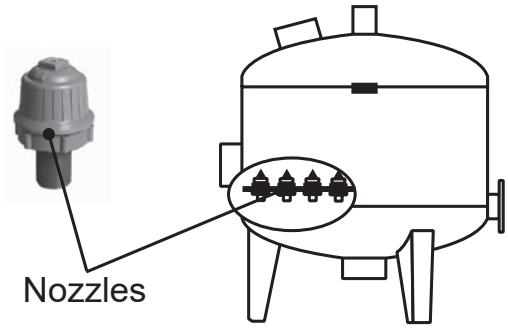
| Code fittings assembled | Pic. | OIV021 | OIV023 |
|---|---|---|---|
| Flowcontrol gate valve | A | FSV030 | FSV031 |
| Threaded flange | B | RFG200 | RFG202 |
| Elbow M/M | C | RGO222 | RGO224 |
| 1 flange assembled threaded manfold | D | FCL010 | FCL011 |
| Glycerin pressure gauge | E | FMO030 | FMO030 |
| Single effect air release | F | FVI322 | FVI322 |

VENTURI KIT SEE ON PAGE 188

## ▶ SAND FILTERS

# SINGLE CHAMBER SAND FILTERS

The quartzite sand filter is particularly suitable in presence of water containing organic matter and micro-organism as canals and ponds water.
Filtering capacity is proportional to quartzite sand medium grain size (0,8  1,2 mm) or the grain (crushed silica) and to solids concentration  suspended in water (T.S.S.), measured in mg/l or p.p.m. (1 mg/l = 1 p.p.m.), to give information about the water treatment.
The separation between volume filter containing grain and  the space for the filtered water is made by a reinforced metal plate whose  passage holes have removable plastic diffusers.



**MATERIALS**
- carbon steel housing thickness 4 mm
- joints and bolts bichromate, 5.6 and 5.8 quality
- polypropylene diffusers with 0,3 mm micro-cracks

**SURFACES TREATMENT**
- sandblasting up to degree 2 ½
- epoxy-polyester powder coating (painted types)
- hot-dip galvanization (galvanized types)

**PRESSIONE MASSIMA**
- 8 Atm

**TECHNICAL CHARACTERISTICS COATED/GALVANIZED FILTERS**

| Code | Treatment | Threaded connection | | Ø mm | Qmax m³/h | High mm | Weight Kg | | N° Nozzle |
|---|---|---|---|---|---|---|---|---|---|
| | | In/Out | Backwash | | | | Filter | Sand | |
| AFLT001 | Coated | 2" | 2" | 500 | 18 | 1.050 | 50 | 70 | 15 |
| AFLT008 | | 3" / 76 vt | | 700 | 40 | 1.080 | 70 | 150 | 29 |
| AFLT032 | | 89 / 89 vt | 3" | 900 | 60 | 1.100 | 120 | 300 | 41 |
| AFLT011 | Galvanized | 2" | 2" | 500 | 18 | 1.050 | 50 | 70 | 15 |
| AFLT014 | | 3" / 76 vt | | 700 | 40 | 1.080 | 70 | 150 | 29 |
| AFLT015 | | 89 / 89 vt | 3" | 900 | 60 | 1.100 | 120 | 300 | 41 |

# GALVANIZED FILTERS WITH MANUAL AND AUTOMATIC BACKWASH

| Code | Description | Ø mm | In/Out | Backwash | $Q_{max}$ m³/h |
|---|---|---|---|---|---|
| AFLB007 | Sand filter | 500 | 2" | 2" | 18,0 |
| AFLB029 • | | 750 | 3" / 76 vt | | 40,0 |
| AFLB111 • | | 950 | 89 / 89 vt | 3" | 60,0 |

• On request

## SAND FILTERS MANIFOLD GALVANIZED AUTOMATIC AND SCREEN FREE MANUAL

| Code | N° unit | Ø Singol unit | Backwash | $Q_{min}$ m³/h | $Q_{max}$ m³/h | Sand Kg | Manifold in | Size max cm Width | Depth | High |
|---|---|---|---|---|---|---|---|---|---|---|
| AFLB010 | 2 | 500 | Automatic 9 VOLT | 18 | 36 | 150 | 3” | 160 | 90 | 162 |
| AFLB020 | | | Automatic 230 VOLT | | | | | | | |
| AFLB030 | | | Manual | | | | | | | |
| AFLB016 | | 750 | Automatic 9 VOLT | 36 | 60 | 520 | 4” | 210 | 115 | 165 |
| AFLB040 | | | Automatic 230 VOLT | | | | | | | |
| AFLB063 | | | Manual | | | | | | | |
| AFLB018 | 3 | | Automatic 9 VOLT | 54 | 90 | 780 | DN125 | 285 | | |
| AFLB022 | | | Automatic 230 VOLT | | | | | | | |
| AFLB032 | | | Manual | | | | | | | |
| AFLB017 | 2 | 950 | Automatic 9 VOLT | 56 | 90 | 750 | | 250 | 135 | 197 |
| AFLB042 | | | Automatic 230 VOLT | | | | | | | |
| AFLB061 | | | Manual | | | | | | | |
| AFLB019 | 3 | | Automatic 9 VOLT | 84 | 135 | 1.125 | DN150 | 350 | | |
| AFLB043 | | | Automatic 230 VOLT | | | | | | | |
| AFLB034 | | | Manual | | | | | | | |

On request we build and supply filtering stations grit completely in stainless steel

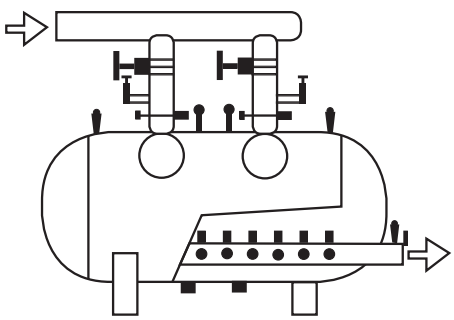
## DOUBLE HORIZONTAL SAND FILTER

The quartzite sand filter is particularly suitable for types of water rich in organic matter and micro-organisms, typical of surface water such as canals and ponds.
In a two-chamber system with a single filter it is possible to process the backwash using the clean water in one chamber to wash the quartzite of the other.
The backwashing may be manual or automatic both for time and/or for pressure differential.

**MATERIALS**
Body: 4 mm. thick steel sheet.
Seals: NBR.
Hot-dip galvanizing.

**MAXIMUM PRESSURE**
80 m.c.a.

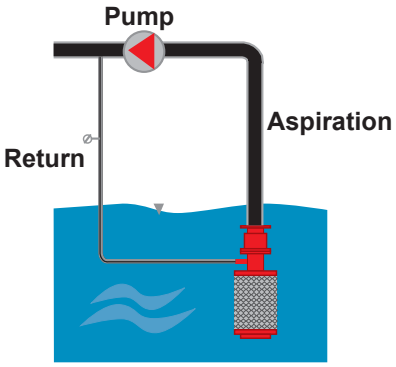
| Code | Ø | $Q_{max}$ m³/h | Dimension mm A lenght | B width | C height | Weight Kg Filter | Sand | N° noz-zles | Backwash |
|---|---|---|---|---|---|---|---|---|---|
| AFL204 | 3" | 40 | 1.400 | 600 | 1.250 | 155 | 350 | 32 | Manual |
| AFL205 | 4" | 58 | 1.600 | 750 | 1.450 | 220 | 600 | 36 | |
| AFL206 | 4" | 100 | 1.950 | 900 | 1.600 | 290 | 850 | 48 | |
| AFL210 | 3" | 40 | 1.400 | 600 | 1.250 | 155 | 350 | 32 | Aut. CC. |
| AFL211 | 4" | 58 | 1.600 | 750 | 1.450 | 220 | 600 | 36 | |
| AFL212 | 4" | 100 | 1.950 | 900 | 1.600 | 290 | 850 | 48 | |



Flow rate is referred to cleaned water (T.S.S. <= 50 mg/l)

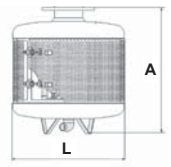
## ► SELF CLEANING SUCTION FILTERS

Suction filter is designed to protect the pumps from debris and foreign matters. It is generally used in water sources containing algea, debris, and other heavy wastes. It is connected to pump suction and submerged into water (river, lake, reservoir, etc.) Water is sucked by the pump passes through the strainer and debris is kept outside by the stainless steel screen. Rotating nozzles are fed with water taken from the pump exit. Water jets sprayed from the nozzles blow away the debris collected on the outer surface of the screen and thus the filter is cleaned.
**Working pressure**: 1,5 ÷ 10 bar - **By-pass flow rate**: 4 m³/h (3 "-4") - **Electrostatic coated body** - **Rotating Nozzles** - **Flange type Connection**




| Code | Connections | | Filtration area mm² | $Q_{max}$ m³/h• | Dimensions mm | |
|---|---|---|---|---|---|---|
| | Flange | Return | | | A | L |
| AVF020 | DN 100 - 4" | 1"¼ | 1.400 | 75 | 800 | 380 |
| AVF021 | DN 150 - 6" | | 1.800 | 120 | 900 | 450 |
| AVF022 | DN 200 - 8" | | 2.000 | 180 | 1.000 | 550 |

• refers to the degree of filtration of the net of 460 micron - 40 mesh




## ► ACCESSORIES AND REPLACEMENTS

### FILTERS REPLACEMENTS

| Code | Description | Connections | | |
|---|---|---|---|---|
| FGS003 | Victaulic Style75 joint | 2" | 60 victaulic | |
| FGS004 | | 2"½ | 76 victaulic | |
| FGS005 | | 3" | 88.9 victaulic | |
| FGS006 | | 4" | 114.3 victaulic | |
| FTS108 | Victaulic flange | 2" | 60 victaulic | |
| FTS109 | | 2"½ | 76 victaulic | |
| FTS110 | | 3" | 88.9 victaulic | |
| FTS111 | | 4" | 114.3 victaulic | |
| FFA299 | Male threaded flange | DN80 x 3" | | |
| FFA300 | | DN100 x 4" | | |
| FFA301 | | DN125 x 5" | | |
| FTS286 | Male Victaulic adaptor lenght 100mm | 2" x 60 | | |
| FTS287 | | 2"½ x 76 | | |
| FTS284 | | 3" x 88.9 | | |
| FTS281 | | 4" x 114.3 | | |
| EPS300 | Murphy pressure differential | | | |
| AAC677 | Diffuser nozzle + dowel TS1 (Mod.T – fil.15/16"W – L = 50mm) | | | |

### GRIT

| SAND (GRIT) BAG 25 KG | |
|---|---|
| Code | Grain size mm• |
| AAC940 | 0,8 ÷ 1,2 |
| AAC946 | 1 ÷ 3 |
| • on request different grain size | |

## MANIFOLD

| Code | | Connection | | Filters | Ø Filter mm |
|---|---|---|---|---|---|
| Galvanized | Coated | 3" | 3"x2"M2"M | 2 | 500 |
| FCL605 | FCL600 | DN100 | DN100x2"Mx2" Inlet filter | | 750 |
| FCL623 | FCL624 | | | | |
| FCL612 | FCL611 | | DN100x76VTx76VT Outlet filter | | |
| FCL616 | FCL614 | DN125 | DN125x89VTx89VT | | 950 |
| FCL311 | FCL317 | | DN125x2"Mx2"Mx2" Inlet filter | 3 | 750 |
| FCL310 | FCL312 | | DN100x76VTx76VTx76VT Outlet filter | | |
| FCL201 | FCL240 | DN150 | DN150x89VTx89VTx89VT | | 950 |

on request galvanized manifold

## FILTERING BATTERIES AUTOMATION KIT

| Code | Description | N°sectors | Supply V |
|---|---|---|---|
| KCF048 | 9 V solenoid automation kit | 1 | 9 |
| KCF049 | | | 24 |
| KCF050 | | 2 | 9 |
| KCF052 | | | 24 |
| KCF053 | | 3 | 9 |
| KCF054 | | | 24 |
| KCF055 | | 4 | 9 |
| KCF056 | | | 24 |

## BACKWASHING FILTERS PROAMMERS AND ELECTRICAL ACCESSORIES

Controller 12V CC

Controller TR

Kit solar panel

| Code | Description | Power In | Power Out | Sectors |
|---|---|---|---|---|
| AAC570 | Controller | 24 Volt CA | | 1 |
| AAC571 | | | | 2 |
| AAC573 | | | | 3 |
| AAC572 | | | | 4 |
| AAC582 | | 12V SOLAR | | 2 |
| AAC583 | | | | 3 |
| AAC584 | | | | 4 |
| AAC559 | Rechargeable 12V 2.2Ah (to load for first use) | | | |
| AAC1055 | Power pack In 230V AC | 230V | 12V CC | |
| AAC1050 | | | 6V CC | |
| AAC558 | Kit Solar Panel (included panel, battery, regolator of charger, structure) | | | |
| AAC555 | Battery rechargeable (1 block) | | | |
| AAC557 | Battery long life (duration about 2 years installed on bistable) | | | |
| AAC556 | Charger | | | |

## ► OSMOSIS WATER TREATMENT RANGE

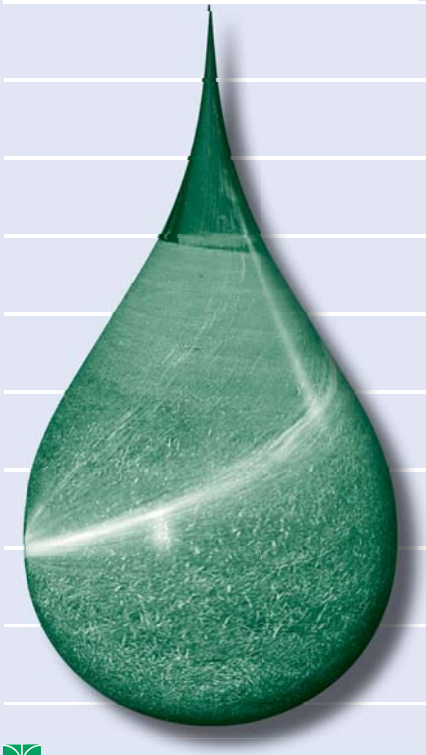
Complete reverse osmosis machinery range for water purification and treatment. Different types with different osmosised water production capacity available. Suitable for industrial water treatment, irrigation, backwashing and solar panels cleaning. Starting from basic one (see the table below), it is possible to treat all types of water together with physical filtration, active charcoal filters, ultra-filtering and UV system.

| Model | Flow rate in L/H• | Power KW | Recovery %• | Supply |
|---|---|---|---|---|
| LINEA COMPACT | 200 | 0,75 | 50 - 75 | 230 V |
| LINEA SYMPLE | 200 ÷ 1100 | 2,20 | | 380 V |
| LINEA HW | 2000 ÷ 6000 | 18,00 | | |
| LINEA HP | 8000 ÷ 30000 | DA 11 ÷ 37 | | |

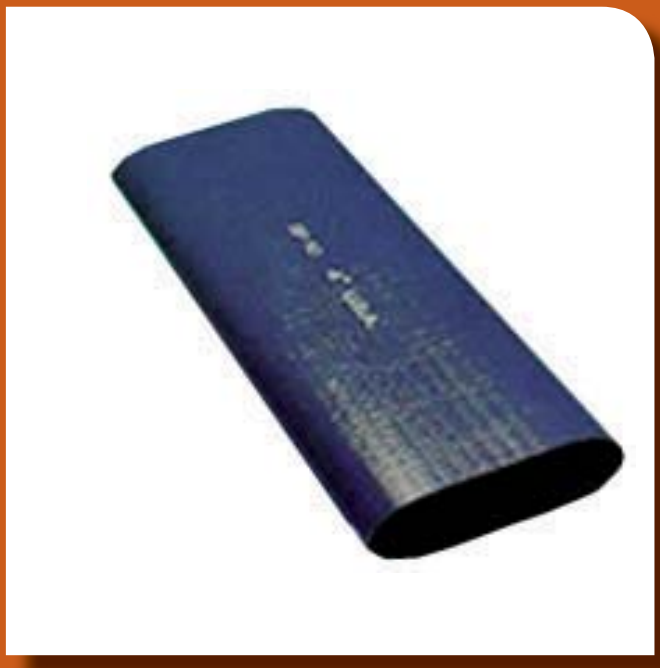
• capacity and recovery factor may vary according to eventual temperature change and inlet water salinity

**Line HP**

Osmosised water storage systems, post-purification bacteriostatic treatment, booster and using systems for generated water, available also automatic.



# AGRICULTURE



## ► DRIPLINE

# FLOW-TAPE DRIPLINE

The Flow-tape represents the latest technological developments in the field of drip irrigation systems.

Flow-tape, due to the multiple delivery point, is particularly suitable for draining soils usually intended for garden crops and flowers.
Flow-tape can be utilized both in protective and open fields for the cultivation of tomato, melon, strawberry, watermelon, onion and much more.

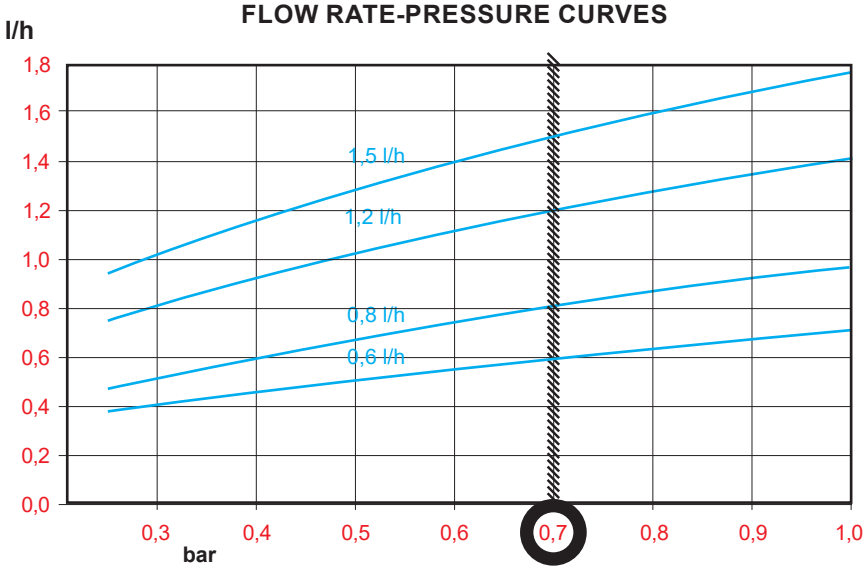
## CHARACTERISTICS AND ADVANTAGES:

- The flow outlet opening made without removal of material which closes at the end of the irrigation cycle avoiding intrusion of foreign particles and formation of salts deposit.
- The particular turbulent flow labyrinth allows high resistance to clogging.
- The high technology employed allows a good emission unitormity. Manufacturlng uniformity: category A in compliance with standard ISO 9261
- The dual colored line allows you lo locate on the side of the supply holes.
- The use of suitable raw materials offers a high resistance lo wearing.

| RECOMMENDED FILTRATION | | | |
|---|---|---|---|
| Dripper lt/h | | | |
| 0,7 bar | 1 bar | Mesh | Micron |
| 0,6 | 0,7 | 200 | 74 |
| 0,8 | 1,0 | 140 | 105 |
| 1,2 | 1,4 | | |
| 1,5 | 1,8 | | |

| MAXIMUM WORKING PRESSURE | | | | | |
|---|---|---|---|---|---|
| Flow-tape Ø mm | | 6 | 8 | 10 | Mil |
| nominal | internal | 152 | 203 | 254 | Micron |
| 16 | 16,1 | 0,8 | 1,0 | 1,2 | |
| 22 | 22,2 | | 0,8 | 1,0 | |

**FLOW RATE-PRESSURE CURVES**



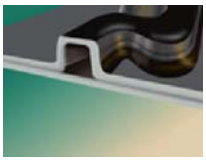
| MAXIMUM LENGTH RECOMMENDED IN PLAN WITH A CHANGE OF FLOW RATE OF 10% | | | | | |
|---|---|---|---|---|---|
| | | Distance in cm between drippers | | | |
| Ø mm | Flow rate l/h | 10 | 20 | 30 | 40 |
| 16 | 0,6 | 87 | 171 | 229 | 278 |
| | 0,8 | 61 | 120 | 160 | 194 |
| | 1,2 | 44 | 86 | 114 | 139 |
| | 1,5 | 35 | 69 | 92 | 115 |
| 22 | 0,6 | 153 | 295 | 396 | 466 |
| | 0,8 | 107 | 206 | 277 | 326 |
| | 1,2 | 76 | 147 | 198 | 233 |
| | 1,5 | 62 | 119 | 159 | 198 |

| BUILDING CODES FOR ORDERS | | | | |
|---|---|---|---|---|
| Code | Ø | Mil | Spacing | Flow |
| TSAT | 5 = ø16 | 6= 6mil | 1= 0,10 | 06=0,6 |
| | 7= ø22 | 8= 8mil | 2= 0,20 | 09=0,9 |
| | | 10= 10mil | 3=0,30 | 12=1,2 |
| | | | 4=0,40 | 15=1,5 |

| PACKAGING | | | | | | | |
|---|---|---|---|---|---|---|---|
| Model Flow-tape | | Lenght (meters/roll) | Rolls/pallet | Rolls/Containér 40 Ft HC | Rolls/truck | Total meters in container | Total meters in truck |
| Ø mm | Thickness mil | | | | | | |
| 16 | 6 | 3.050 | 20/40• | 800 | 880 | 2.440.000 | 2.684.000 |
| | 8 | 2.200 | | | | 1.760.000 | 1.936.000 |
| | 10 | 1830 | | | | 1.464.000 | 1.610.400 |
| | 12 | 1500 | | | | 1.200.000 | 1.320.000 |
| 22 | 6 | 2.200 | | | | 1.760.000 | 1.936.000 |
| | 8 | 1.830 | | | | 1.464.000 | 1.610.400 |
| | 10 | 1.340 | | | | 1.072.000 | 1.179.200 |
| | 12 | 1.220 | | | | 976.000 | 1.073.600 |

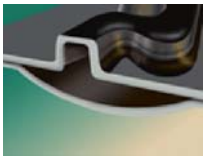
• Particular requests

# TAPE JOHN DEERE RO DRIP



**Precision Molded Channel**
Precision engineering ensures large, uniform channels. Each contour is designed and molded to eliminate variability and deliver uniform flow rates. Other drip tapes simply can't match this level of performance-run after run.

**Vortex Action**
Designed-in turbulence keeps particles suspended and moving through every corner, twist, and turn of the flow channel. With no place to rest, particles are flushed out continuously, before they build into real problems.



**Expanding Flow Channel**
This exclusive RO-DRIP feature creates a truly remarkable "second line of defense" against plugging during high-contaminant conditions. The flow channel can actually expand to purge an obstruction and restore flow.

**MAXIMUM LENGHT**

| Thkick. mil | Ø | Spacing/flow x 100 mt | Uniformity | Slope -1% Bar incoming | | | | Slope 0% Bar incoming | | | | Slope 1% Bar incoming | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0,41 | 0,55 | 0,69 | 0,83 | 0,41 | 0,55 | 0,69 | 0,83 | 0,41 | 0,55 | 0,69 | 0,83 |
| 6 | 16 | 10 cm/500 l/h | 85% | 200 | 196 | 193 | 190 | 158 | 159 | 160 | 161 | 98 | 111 | 119 | 125 |
| | | | 90% | 161 | 158 | 155 | 153 | 125 | 126 | 127 | 128 | 71 | 80 | 89 | 94 |
| | | 10 cm/750 l/h | 85% | 151 | 147 | 145 | 143 | 121 | 123 | 123 | 124 | 84 | 92 | 97 | 101 |
| | | | 90% | 121 | 118 | 116 | 114 | 96 | 97 | 98 | 98 | 62 | 69 | 74 | 78 |
| | | 20 cm/250 l/h | 85% | 318 | 315 | 308 | 303 | 243 | 243 | 244 | 243 | 115 | 137 | 152 | 163 |
| | | | 90% | 253 | 261 | 246 | 242 | 191 | 191 | 191 | 191 | 77 | 94 | 107 | 118 |
| | | 20 cm/500 l/h | 85% | 200 | 196 | 193 | 190 | 158 | 159 | 160 | 161 | 98 | 111 | 119 | 125 |
| | | | 90% | 161 | 158 | 155 | 153 | 125 | 126 | 127 | 128 | 71 | 80 | 89 | 94 |
| | | 30 cm/185 l/h | 85% | 382 | 381 | 376 | 370 | 292 | 291 | 292 | 292 | 123 | 149 | 168 | 182 |
| | | | 90% | 301 | 304 | 301 | 296 | 230 | 230 | 230 | 229 | 82 | 100 | 117 | 129 |
| | | 30 cm/300 l/h | 85% | 283 | 281 | 276 | 274 | 219 | 220 | 222 | 224 | 116 | 134 | 148 | 158 |
| | | | 90% | 228 | 226 | 223 | 219 | 173 | 175 | 176 | 176 | 80 | 96 | 108 | 116 |
| | | 41 cm/125 l/h | 85% | 486 | 495 | 494 | 490 | 378 | 379 | 379 | 377 | 130 | 163 | 187 | 208 |
| | | | 90% | 369 | 389 | 393 | 391 | 299 | 297 | 297 | 298 | 84 | 106 | 128 | 143 |
| | | 41 cm/250 l/h | 85% | 320 | 318 | 315 | 311 | 245 | 247 | 250 | 251 | 122 | 143 | 158 | 170 |
| | | | 90% | 257 | 256 | 254 | 249 | 195 | 196 | 198 | 199 | 84 | 102 | 114 | 125 |
| | 19 | 20 cm/500 l/h | 85% | 263 | 261 | 258 | 254 | 203 | 206 | 206 | 207 | 111 | 129 | 141 | 150 |
| | | | 90% | 212 | 210 | 207 | 204 | 162 | 162 | 163 | 165 | 77 | 92 | 103 | 112 |
| | | 30 cm/185 l/h | 85% | 488 | 495 | 494 | 491 | 376 | 376 | 376 | 376 | 128 | 162 | 186 | 207 |
| | | | 90% | 372 | 390 | 393 | 390 | 296 | 296 | 296 | 296 | 81 | 104 | 125 | 140 |
| | | 30 cm/300 l/h | 85% | 370 | 370 | 367 | 363 | 282 | 283 | 287 | 288 | 126 | 152 | 171 | 186 |
| | | | 90% | 296 | 297 | 296 | 293 | 223 | 226 | 227 | 227 | 84 | 104 | 120 | 134 |
| 8 | 22 | 20 cm/500 l/h | 85% | 358 | 357 | 354 | 351 | 262 | 266 | 270 | 272 | 122 | 146 | 166 | 178 |
| | | | 90% | 286 | 286 | 285 | 282 | 206 | 209 | 212 | 215 | 82 | 101 | 116 | 128 |
| | | 30 cm/185 l/h | 85% | 627 | 653 | 661 | 661 | 472 | 476 | 480 | 482 | 133 | 169 | 201 | 228 |
| | | | 90% | 123 | 498 | 516 | 522 | 368 | 370 | 373 | 377 | 83 | 108 | 130 | 149 |
| 13 | | 30 cm/300 l/h | 85% | 492 | 500 | 501 | 498 | 357 | 363 | 368 | 372 | 134 | 167 | 191 | 213 |
| | | | 90% | 384 | 399 | 400 | 400 | 280 | 286 | 289 | 292 | 87 | 112 | 130 | 148 |

# STANDARD COIL JOHN DEERE RODRIP

| INTERNAL DIAMETER 16 MM | | | | | |
|---|---|---|---|---|---|
| Thkickness mil | Spacing cm | Q l/h/100mt a 0,55 bar | Coil mt | Weight Kg | Code |
| 6 | 10 | 750 | 3.048 | 33 | TSAT121 |
| | 20 | 500 | | | TSAT123 |
| | 30 | 300 | | | TSAT125 |
| | 41 | 250 | | | TSAT127 |
| 8 | 10 | 750 | 2.286 | 32 | TSAT141 |
| | 20 | 250 | | | TSAT142 |
| | 20 | 500 | | | TSAT143 |
| | 30 | 300 | | | TSAT145 |
| | 41 | 250 | | | TSAT147 |
| 10 | 41 | 250 | 1.828 | 31 | TSAT171 |

| INTERNAL DIAMETER 19 MM | | | | | |
|---|---|---|---|---|---|
| Thkickness mil | Spacing cm | Q l/h/100mt a 0,55 bar | Coil mt | Weight Kg | Code |
| 6 | 30 | 300 | 2.743 | 29 | TSAT304 |

| INTERNAL DIAMETER 22 MM | | | | | |
|---|---|---|---|---|---|
| Thkickness mil | Spacing cm | Q l/h/100mt a 0,55 bar | Coil mt | Weight Kg | Code |
| 8 | 20 | 500 | 1.737 | 29 | TSAT399 |
| | 30 | 185 | | | TSAT400 |
| | | 300 | | | TSAT401 |
| 10 | | | 1.524 | 34 | TSAT421 |

| Spacing RO-DRIP (cm) | Mt of drip for Ha | Flow rate (l/h) for 100 mt di tape a 0,55 bar | | | | | |
|---|---|---|---|---|---|---|---|
| | | 750 | 500 | 300 | 250 | 210 | 185 |
| | | $m^3$/h requested for Ha | | | | | |
| 80 | 12.500 | 93 | 62 | 38 | 31 | 26 | 23 |
| 90 | 11.110 | 83 | 55 | 33 | 27 | 23 | 21 |
| 100 | 10.000 | 75 | 50 | 30 | 25 | 21 | 19 |
| 110 | 9.090 | 68 | 45 | 27 | 22 | 19 | 17 |
| 120 | 8.333 | 62 | 42 | 25 | 21 | 18 | 16 |
| 130 | 7.692 | 57 | 38 | 23 | 19 | 16 | 14 |
| 140 | 7.143 | 53 | 36 | 21 | 18 | 15 | 13 |
| 150 | 6.667 | 50 | 33 | 20 | 16 | 14 | 12 |
| 160 | 6.250 | 47 | 31 | 19 | 15 | 13 | 12 |
| 170 | 5.882 | 44 | 29 | 18 | 15 | 12 | 11 |
| 180 | 5.556 | 41 | 28 | 17 | 14 | 12 | 10 |
| 190 | 5.263 | 39 | 26 | 16 | 13 | 11 | 10 |
| 200 | 5.000 | 37 | 25 | 15 | 12 | 11 | 9 |
| 210 | 4.762 | 35 | 24 | 14 | 12 | 10 | 9 |
| 220 | 4.546 | 34 | 23 | 14 | 11 | 10 | 9 |
| 230 | 4.348 | 32 | 22 | 13 | 11 | 9 | 8 |
| 240 | 4.167 | 31 | 21 | 13 | 10 | 9 | 8 |

# T - SAL

## T-SAL SHORT DRIPPER with 1,0 L/H NOMINAL FLOW RATE /H

Big drippers with turbolent labyrinth flow made using only high quality polymers. **CV%= 1,5**.
T-sal is used on annual crops like tomatoes, potatoes, peppers.
**Nominal flow rate of the dripper 1,0 l/h (1,6 for mini coils).**
**Filtration recommended 120 mesh (125 micron).**

| T-SAL Ø 16 | | | | | | |
|---|---|---|---|---|---|---|
| Thick. | Spacing cm | Coil mt | l/h | Code | $P_{max}$ oper. bar | Ø int. mm |
| 6 mil | 15 | 2.700 | 1,0 | TSAL400 | 1,0 | 16,1 |
| | 20 | 2.800 | | TSAL401 | | |
| | 25 | 2.900 | | TSAL402 | | |
| | 30 | 3.000 | | TSAL403 | | |
| | 40 | | | TSAL404 | | |
| 8 mil | 15 | 2.600 | | TSAL160 | 1,2 | |
| | 20 | 2.700 | | TSAL161 | | |
| | 25 | 2.800 | | TSAL162 | | |
| | 30 | 2.900 | | TSAL163 | | |
| | 40 | | | TSAL164 | | |
| 10 mil | 20 | 2.500 | | TSAL451 | 1,4 | |
| | 25 | 2.700 | | TSAL452 | | |
| | 30 | 2.800 | | TSAL453 | | |
| | 40 | | | TSAL454 | | |
| 12 mil | 20 | 1.700 | | TSAL501 | 1,5 | |
| | 25 | 1.800 | | TSAL502 | | |
| | 30 | 2.000 | | TSAL503 | | |
| | 40 | | | TSAL504 | | |
| 15 mil | 15 | 1.250 | 1,5 | TSAL620 | 2,0 | |
| | 20 | 1.350 | | TSAL621 | | |
| | 25 | 1.400 | | TSAL622 | | |
| | 30 | 1.500 | | TSAL623 | | |
| | 40 | | | TSAL624 | | |

| NUMBER OF ROLLS FOR SHIPMENT | | | |
|---|---|---|---|
| Rolls/ pallet | Rolls/Container 40 Ft HC | Rolls/Container 20 ft | Truck 44 pallets |
| 20 | 800 | 600 | 880• |

• It depends on the weight, minimum 40 pallets

| VARIANCE OF NOMINAL FLOW RATE (1,0 L/H) CONSIDERING P (M.C.A.) | | | | | |
|---|---|---|---|---|---|
| | | m.c.a. | | | |
| | | 5 | 8 | 10 | 12 |
| l/h | 0,6• | 0,42 | 0,54 | 0,60 | 0,66 |
| | 1,0 | 0,70 | 0,86 | 0,95 | 1,03 |
| | 1,4• | 0,99 | 1,23 | 1,36 | 1,48 |

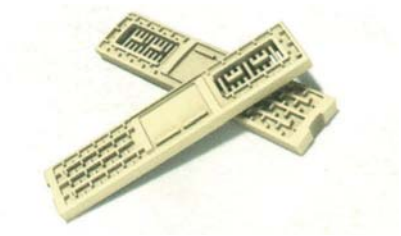
• On request

| T-SAL Ø 22 | | | | | | |
|---|---|---|---|---|---|---|
| Thick. | Spacing cm | Coil mt | l/h | Code | $P_{max}$ oper. bar | Ø int. mm |
| 8 mil | 20 | 2.000 | 1,0 | TSAL702 | 1,0 | 22,2 |
| | 25 | | | TSAL699 | | |
| | 30 | 2.100 | | TSAL703 | | |
| | 40 | | | TSAL704 | | |
| 10 mil | 20 | 1.800 | | TSAL761 | 1,3 | |
| | 25 | | | TSAL762 | | |
| | 30 | 1.600 | | TSAL763 | | |
| | 40 | | | TSAL764 | | |

| MAXIMUM LENGTH FOR T-SAL SHORT DRIPPER WITH 0% SLOPE | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø ala mm | Thick. | Flow Rate l/h | Spacing in cm within drippers | | | | | | | | | | | | | | | | | | |
| | | | 15 | | 20 | | 25 | | 33 | | 40 | | 50 | | 60 | | 80 | | 100 | | |
| | | variance flow % | 10% | 15% | 10% | 15% | 10% | 15% | 10% | 15% | 10% | 15% | 10% | 15% | 10% | 15% | 10% | 15% | 10% | 15% | |
| 16 | 8 mil | 0,6 | 128 | 149 | 156 | 182 | 181 | 212 | 218 | 254 | 248 | 289 | 288 | 336 | 324 | 378 | 392 | 457 | 453 | 529 | |
| | | 1,0 | 99 | 115 | 120 | 140 | 140 | 163 | 168 | 196 | 191 | 222 | 222 | 258 | 250 | 291 | 302 | 351 | 350 | 407 | |
| | | 1,4 | 78 | 91 | 94 | 110 | 110 | 127 | 131 | 153 | 149 | 173 | 173 | 201 | 194 | 226 | 234 | 273 | 271 | 315 | |
| 22 | | 0,6 | 219 | 255 | 267 | 311 | 312 | 363 | 353 | 411 | 428 | 498 | 496 | 578 | 560 | 652 | 678 | 789 | 784 | 914 | |
| | | 1,0 | 166 | 193 | 202 | 235 | 236 | 274 | 266 | 310 | 323 | 376 | 375 | 437 | 424 | 493 | 512 | 596 | 593 | 690 | |
| | | 1,4 | 133 | 155 | 161 | 188 | 187 | 218 | 211 | 245 | 255 | 296 | 295 | 343 | 332 | 386 | 401 | 466 | 464 | 539 | |

## T-SAL SHORT DRIPPER WITH NOMINAL FLOW RATE 2,2 L/H

Big drippers with turbolent labyrinth flow made using only high quality polymers. **CV%= 1,5**.
T-sal is used on annual crops like tomatoes, potatoes, peppers.
**Nominal flow rate of the dripper 2,2 l/h.**
**Filtration recommended 120 mesh (125 micron).**



| VARIANCE NOMINAL FLOW RATE (2,2 L/H) CONSIDERING PRESSURE (M.C.A.) | | | | |
|---|---|---|---|---|
| m.c.a. | 5 | 10 | 15 | 20 |
| l/h | 1,58 | 2,30 | 2,86 | 3,34 |
| On request drippers 0,8 - 1,15 - 1,5 - 3,8 | | | | |

**T-SAL Ø 16**

| Thick. | Spacing cm | Coil mt | l/h | Code | Pmax oper. Bar | Ø int. mm |
|---|---|---|---|---|---|---|
| 6 mil | 15 | 2.300 | 2,2 | TSAL430 | 1,0 | 16,1 |
| | 20 | 2.400 | | TSAL431 | | |
| | 25 | 2.500 | | TSAL432 | | |
| | 30 | 2.600 | | TSAL433 | | |
| | 40 | | | TSAL434 | | |
| 8 mil | 15 | 2.200 | | TSAL190 | 1,2 | |
| | 20 | 2.300 | | TSAL191 | | |
| | 25 | 2.400 | | TSAL192 | | |
| | 30 | 2.500 | | TSAL193 | | |
| | 40 | | | TSAL194 | | |
| 10 mil | 20 | 2.000 | | TSAL481 | 1,4 | |
| | 25 | 2.100 | | TSAL482 | | |
| | 30 | 2.300 | | TSAL483 | | |
| | 40 | | | TSAL484 | | |
| 12 mil | 20 | 1.400 | | TSAL531 | 1,5 | |
| | 25 | 1.500 | | TSAL532 | | |
| | 30 | 1.700 | | TSAL533 | | |
| | 40 | | | TSAL534 | | |
| 15 mil | 15 | 1.250 | | TSAL630 | 1,8 | |
| | 20 | 1.350 | | TSAL631 | | |
| | 25 | 1.400 | | TSAL632 | | |
| | 30 | 1.500 | | TSAL633 | | |
| | 40 | | | TSAL634 | | |
| 18 mil | 15 | 800 | | TSAL680 | 2,0 | |
| | 20 | 900 | | TSAL681 | | |
| | 25 | 950 | | TSAL682 | | |
| | 30 | 1.000 | | TSAL683 | | |
| | 40 | | | TSAL684 | | |

**T-SAL MINI COIL Ø 16**

| Thick. | Spacing cm | Coil mt | l/h | Code | $P_{max}$ oper. bar | Ø int. mm |
|---|---|---|---|---|---|---|
| 8 mil | 20 | 250 | 1,5 | TSAL1072 | 1,2 | 16,1 |
| | 30 | | | TSAL1074 | | |

**T-SAL Ø 22**

| Thickness | Spacing cm | Coil mt | l/h | Code | Pmax oper. Bar | Ø int. mm |
|---|---|---|---|---|---|---|
| 8 mil | 20 | 1.600 | 2,2 | TSAL731 | 1 | 22,2 |
| | 25 | | | TSAL732 | | |
| | 30 | 1.800 | | TSAL733 | | |
| | 40 | | | TSAL734 | | |
| 10 mil | 20 | 2.000 | | TSAL781 | 1,3 | |
| | 25 | | | TSAL782 | | |
| | 30 | 1.600 | | TSAL783 | | |
| | 40 | | | TSAL784 | | |
| 12 mil | 20 | 1.250 | | TSAL831 | 1,4 | |
| | 25 | 1.350 | | TSAL832 | | |
| | 30 | 1.450 | | TSAL833 | | |
| | 40 | | | TSAL834 | | |
| 15 mil | 20 | 1.050 | | TSAL871 | 1,6 | |
| | 25 | 1.150 | | TSAL872 | | |
| | 30 | 1.250 | | TSAL873 | | |
| | 40 | | | TSAL874 | | |

**MAXIMUM LENGTH FOR T-SAL LONG DRIPPER WITH 0% SLOPE**

| Ø ala mm | Thick. | Flow rate l/h | Spacing in cm within drippers | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 15 | | 20 | | 25 | | 30 | | 40 | | 50 | | 60 | | 80 | | 100 | |
| | | **variance flow %** | **10%** | **15%** | **10%** | **15%** | **10%** | **15%** | **10%** | **15%** | **10%** | **15%** | **10%** | **15%** | **10%** | **15%** | **10%** | **15%** | **10%** | **15%** |
| 16 | 8 mil | 0,8 | 100 | 117 | 124 | 144 | 146 | 170 | 166 | 193 | 203 | 236 | 237 | 275 | 268 | 311 | 325 | 378 | 377 | 439 |
| | | 1,2 | 76 | 89 | 94 | 109 | 110 | 129 | 125 | 146 | 153 | 179 | 179 | 209 | 202 | 236 | 246 | 286 | 285 | 333 |
| | | 1,5 | 64 | 74 | 79 | 92 | 93 | 108 | 106 | 123 | 129 | 150 | 151 | 176 | 170 | 199 | 206 | 241 | 240 | 280 |
| | | 2,3 | 51 | 59 | 62 | 72 | 73 | 85 | 83 | 97 | 101 | 118 | 118 | 137 | 133 | 155 | 162 | 188 | 188 | 218 |
| | | 3,8 | 36 | 41 | 44 | 51 | 52 | 60 | 59 | 69 | 72 | 84 | 85 | 98 | 95 | 111 | 116 | 135 | 135 | 157 |
| 22 | | 0,8 | 170 | 197 | 211 | 245 | 249 | 290 | 284 | 331 | 349 | 406 | 408 | 475 | 463 | 539 | 564 | 657 | 656 | 764 |
| | | 1,2 | 127 | 147 | 158 | 184 | 186 | 217 | 212 | 248 | 261 | 304 | 305 | 356 | 346 | 404 | 422 | 492 | 490 | 572 |
| | | 1,5 | 111 | 130 | 139 | 161 | 164 | 191 | 187 | 218 | 230 | 268 | 269 | 313 | 305 | 355 | 371 | 433 | 431 | 503 |
| | | 2,3 | 84 | 98 | 104 | 122 | 123 | 143 | 140 | 163 | 172 | 200 | 201 | 234 | 227 | 265 | 276 | 322 | 321 | 374 |
| | | 3,8 | 59 | 69 | 74 | 86 | 87 | 101 | 100 | 116 | 122 | 142 | 143 | 167 | 163 | 190 | 198 | 230 | 230 | 268 |

# DRIPLINE NOT SELF COMPENSATING NEW GR

GR has been providing accurate, dependable performance to growers of virtually every kind of drip irrigated crop. The continuous success of this incredible dripline is confirmed by the excellent feedback we receive daily from growers. Multipurpose and dependable, GR has a history of success in orchards, vineyards and row crop fields throughout the world, with many original systems still in use after more than 18 years.
Available in both large and small diameter tubing and with four flow rate options, GR is well suited for any field situation.

**Ø 16 GR**

| Thick. | Spacing cm | Coil mt | l/h | Code | $P_{max}$ oper. bar | Ø mm int. | Ø mm ext. | Filtr. mesh |
|---|---|---|---|---|---|---|---|---|
| 1,1 mm | 20 | 400 | 2 | TSAP320 | 4,5 | 13,8 | 15,8 | 120 |
| | 30 | | | TSAP321 | | | | |
| | 40 | | | TSAP322 | | | | |
| | 50 | | | TSAP323 | | | | |
| | 60 | | | TSAP324 | | | | |
| | 80 | | | TSAP325 | | | | |

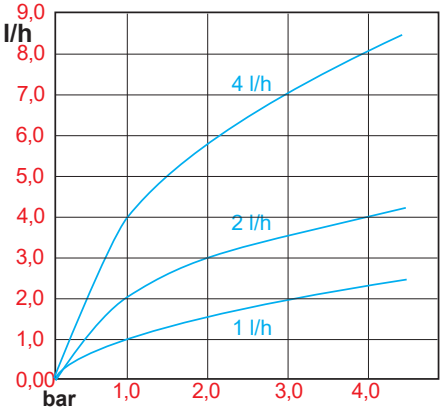
**Ø 20 GR**

| Thick. | Spacing cm | Coil mt | l/h | Code | $P_{max}$ oper. bar | Ø mm int. | Ø mm ext. | Filtr. mesh |
|---|---|---|---|---|---|---|---|---|
| 1,2 mm | 20 | 300 | 2 | TSAP330 | 4,5 | 17,6 | 20 | 120 |
| | 30 | | | TSAP331 | | | | |
| | 40 | | | TSAP332 | | | | |
| | 50 | | | TSAP333 | | | | |
| | 60 | | | TSAP334 | | | | |
| | 80 | | | TSAP335 | | | | |

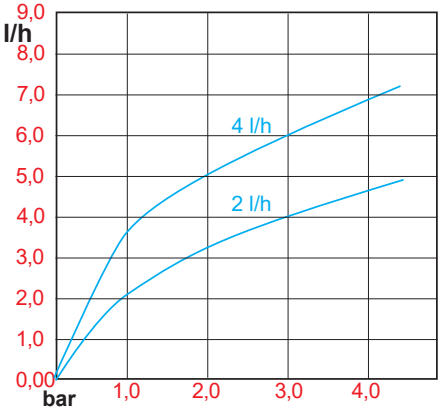
**NEW GR - PACKAGING**

| Shipments | | ø16 | ø20 |
|---|---|---|---|
| Container | 20ft | 65.000 | 45.000 |
| | 40ft | 130.000 | 90.000 |
| Truck | | 174.000 | 114.000 |
| Rolls | | 400 | 300 |

**Ø 16 PRESSURE-FLOW RATE**



**Ø 20 PRESSURE-FLOW RATE**




**MAX LENGHT 0% SLOPE (MAX 10% VARIANCE OF FLOW RATE)**

| Inlet pressure (bar) | Spazio tra gocciolatori (mt) | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0,3 | 0,4 | 0,5 | 0,6 | 0,8 | 0,3 | 0,4 | 0,5 | 0,6 | 0,8 | 0,3 | 0,4 | 0,5 | 0,6 | 0,8 | 0,3 | 0,4 | 0,5 | 0,6 | 0,8 | 0,3 | 0,4 | 0,5 | 0,6 | 0,8 |
| | Flow dripper 1 l/h• | | | | | Flow dripper 2 l/h | | | | | | | | | | Flow dripper 4 l/h• | | | | | | | | | |
| | Ø dripline 16 mm | | | | | Ø dripline 16 mm | | | | | Ø dripline 20 mm | | | | | Ø dripline 16 mm | | | | | Ø dripline 20 mm | | | | |
| 1,0 | 91 | 113 | 133 | 151 | 186 | 62 | 77 | 91 | 104 | 127 | 95 | 117 | 138 | 157 | 191 | 41 | 51 | 61 | 69 | 85 | 72 | 90 | 105 | 119 | 146 |

• On request

# DRIPLINE SELF COMPENSATING PC2

PC2 membrane compensation

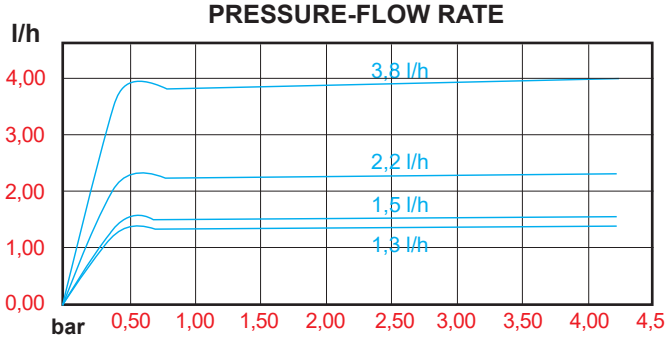
## CUSTOMER BENEFITS & PRODUCT APPLICATION

- Large turbulent flow path, double filtration inlets, twin labyrinth design and the widest pressure compensation range (0,5-4,5 bar) in the industry means uncompromising and unmatched performance.
- Dual self-flushing mechanism flushes at every start-up and during operation ensuring reliable operation and less maintenance day-after-day, for year-after-year.
- Even the most severe field elevation changes are no match for PC2 membrane pressure compensation, ensuring plants from the top to the bottom of the hill will receive exactly the same amount of water.
- Standard and custom emitter spacing available in multiples of 15 to 200 cm.
- Ideal applications include vineyards, orchards, landscaping, row crops, and cotton in undulating terrain both surface and subsurface.

| Thickness | Spacing cm | Coil mt | l/h | Code | Ø mm int. | Ø mm ext. |
|---|---|---|---|---|---|---|
| **COMPENSATING DRIPLINE PC2 Ø 16** | | | | | | |
| 1,10 mm | 30 | 400 | 2,2 | TSAU022 | 13,7 | 15,8 |
| | 40 | | | TSAU023 | | |
| | 50 | | | TSAU024 | | |
| | 60 | | | TSAU025 | | |
| | 80 | | | TSAU026 | | |
| **COMPENSATING DRIPLINE PC2 Ø 20** | | | | | | |
| 1,25 mm | 30 | 300 | 2,2 | TSAU032 | 15,7 | 19,9 |
| | 40 | | | TSAU033 | | |
| | 50 | | | TSAU034 | | |
| | 60 | | | TSAU035 | | |
| | 80 | | | TSAU036 | | |

| PC2 - PACKAGING | | | |
|---|---|---|---|
| Shipments | | ø16 | ø20 |
| Container | 20ft | 65.000 | 45.000 |
| | 40 ft | 130.000 | 90.000 |
| Truck | | 174.000 | 114.000 |
| Rolls | | 400 | 300 |

### PRESSURE-FLOW RATE



**MAX LENGHT 0% SLOPE (MAX 10% VARIANCE OF FLOW RATE)**

| Inlet pressure (bar) | Spacing within drippers (mt) | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0,3 | 0,4 | 0,5 | 0,6 | 0,8 | 0,3 | 0,4 | 0,5 | 0,6 | 0,3 | 0,4 | 0,5 | 0,6 | 0,8 | 0,3 | 0,4 | 0,5 | 0,6 | 0,3 | 0,4 | 0,5 | 0,6 | 0,8 | 0,3 | 0,4 | 0,5 | 0,6 |
| | Flow dripper 1,3 l/h• | | | | | Flow dripper 1,5 l/h• | | | | Flow dripper 2,2 l/h | | | | | | | | | Flow dripper 3,8 l/h• | | | | | | | | |
| | Ø dripline 16 mm | | | | | Ø dripline 20 mm | | | | Ø ala 16 mm | | | | | Ø dripline 20 mm | | | | Ø dripline 16 mm | | | | | Ø dripline 20 mm | | | |
| 1,5 | 107 | 138 | 166 | 193 | 242 | 149 | 191 | 231 | 268 | 77 | 99 | 119 | 138 | 174 | 116 | 148 | 179 | 208 | 54 | 69 | 83 | 96 | 121 | 81 | 104 | 125 | 145 |
| 2,0 | 126 | 162 | 196 | 227 | 286 | 176 | 226 | 272 | 316 | 91 | 116 | 140 | 163 | 205 | 136 | 175 | 212 | 245 | 63 | 81 | 98 | 113 | 142 | 95 | 122 | 148 | 171 |
| 2,5 | 141 | 181 | 219 | 254 | 320 | 197 | 252 | 304 | 353 | 101 | 130 | 157 | 182 | 229 | 152 | 196 | 236 | 274 | 70 | 90 | 109 | 127 | 159 | 106 | 136 | 165 | 191 |
| 3,0 | 153 | 196 | 237 | 276 | 347 | 213 | 274 | 330 | 383 | 110 | 141 | 170 | 197 | 249 | 166 | 212 | 257 | 298 | 76 | 98 | 119 | 138 | 174 | 115 | 148 | 179 | 208 |
| 3,5 | 164 | 210 | 254 | 295 | 372 | 228 | 292 | 353 | 410 | 118 | 151 | 182 | 211 | 266 | 177 | 227 | 274 | 319 | 82 | 105 | 127 | 147 | 186 | 123 | 158 | 191 | 222 |
| 4,0 | 173 | 222 | 268 | 311 | 393 | 241 | 309 | 373 | 433 | 124 | 159 | 192 | 223 | 282 | 187 | 240 | 290 | 337 | 86 | 111 | 134 | 156 | 196 | 130 | 167 | 202 | 235 |
| 4,5 | 181 | 232 | 281 | 327 | 412 | 252 | 324 | 391 | 454 | 130 | 167 | 202 | 234 | 295 | 196 | 252 | 304 | 353 | 91 | 116 | 141 | 163 | 206 | 136 | 175 | 212 | 247 |

N.B. the above value refer to min pressure of 5 m.c.a. at the bottom of dripline

• on request

# PC2 NO DRAIN
# DRIPLINE SELF COMPENSATING

NEW

PC2 NO DRAIN is a dripline containing flow-regulating cylindrical drippers.

PC2 NO DRAIN has a sensitive floating diaphragm which regulates and maintains a constant flow rate at variable inlet pressures. In addition to the flow regulation, PC2ND also has a no-drain feature. The water stops flowing through the drippers when the pressure drops to 0,1 bar. The no-drain feature protects driplines from sucking in small soil particles at system shut down. And with two outlets per dripper, PC2ND will continue to deliver the right amount of water, throughout the entire field.
The PC2ND is the ideal choice for subsurface drip irrigation systems. Like the standard Hydro PC, it has a high clogging resistance due to the design and size of the dripper channel. And with the self-cleaning mechanism, the dripper continuously flushes the inlet filter in the dripline.

The PC2ND is constructed with premium resins resistant to UV degradation and damage caused from commonly used chemical substances for the fertilization.

## CARATTERISTICHE TECNICHE

### Ø 16

- Øext 16 mm – Øint 13,8 mm
- Thickness: 1 mm (40 mils)
- Roll lenght: 400 mt
- Flow Rate: 1,75 - 2,35 - 3,75 l/h
- Filtration suggested: 120 mesh
- Spacing: cm 15 - 20 - 30 - 40 - 50 - 60
- Pressure: max 3,5 bar min. 0,8 bar closing 0,1 bar

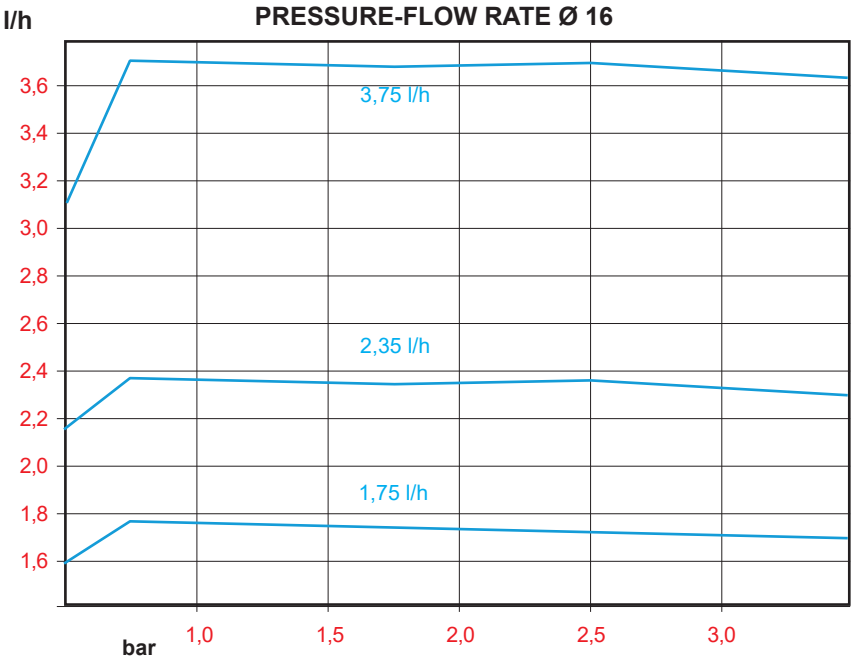
### Ø 20

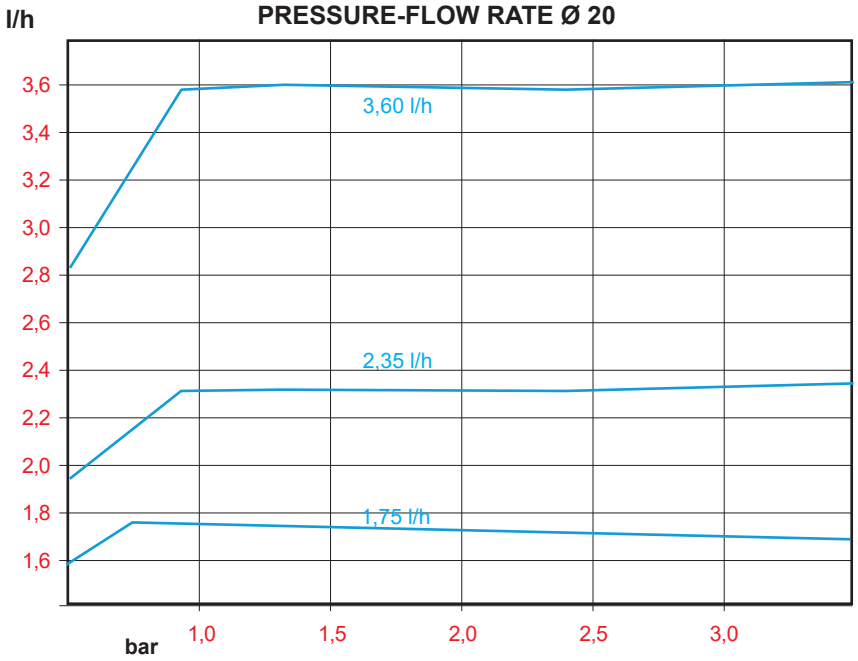
- Øext 16 mm – Øint 17,6 mm
- Thickness: 1,143 mm (45 mils)
- Roll lenght: 300 mt
- Flow Rate: 2,35 - 3,60 l/h
- Filtration suggested: 120 mesh
- Spacing: cm 20 - 30 - 40 - 50 - 60
- Pressure: max 3,5 bar min. 0,8 bar closing 0,1 bar

| PC2 NO DRAIN Ø16 | | | | |
|---|---|---|---|---|
| Thickness | Spacing cm | Roll mt | l/h | Code |
| 1 mm (40 mils) | 15 | 400 | 1,75 | TAG459 |
| | 20 | | 2,35 | TAG460 |
| | 30 | | | TAG462 |
| | 40 | | | TAG464 |
| | 50 | | | TAG465 |
| | 60 | | | TAG466 |
| **PC2 NO DRAIN Ø20** | | | | |
| Thickness | Spacing cm | Roll mt | l/h | Code |
| 1,143 mm (45 mils) | 20 | 300 | 2,35 | TAG330 |
| | 30 | | | TAG333 |
| | 40 | | | TAG334 |
| | 50 | | | TAG335 |
| | 60 | | | TAG332 |

| PC2 NO DRAIN max lenght 0% slope | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | Ø 16 mm | | | Ø 20 mm | | |
| | | Input pressure bar | | | | | |
| Flow Rate l/h | Spacing within dripper cm | 1,0 | 2,0 | 3,0 | 1,0 | 2,0 | 3,0 |
| 1,75 | 20 | 43 | 76 | 92 | 71 | 124 | 152 |
| | 30 | 62 | 107 | 131 | 99 | 174 | 213 |
| | 40 | 78 | 136 | 167 | 124 | 219 | 269 |
| | 50 | 93 | 163 | 201 | 148 | 261 | 321 |
| | 60 | 107 | 188 | 232 | 169 | 299 | 368 |
| 2,35 | 20 | 36 | 62 | 76 | 54 | 101 | 124 |
| | 30 | 51 | 89 | 108 | 76 | 141 | 175 |
| | 40 | 64 | 112 | 138 | 95 | 178 | 220 |
| | 50 | 77 | 135 | 166 | 113 | 212 | 263 |
| | 60 | 88 | 156 | 191 | 129 | 244 | 302 |
| 3,75• | 20 | 26 | 46 | 56 | 44 | 77 | 95 |
| | 30 | 37 | 65 | 80 | 62 | 109 | 133 |
| | 40 | 47 | 83 | 102 | 78 | 137 | 168 |
| | 50 | 57 | 100 | 122 | 93 | 163 | 201 |
| | 60 | 65 | 115 | 142 | 106 | 188 | 231 |

• Flowrate for Ø 20 mm 3,60 l/h



# DRIPLINE SELF COMPENSATING SUPER DRIP NORMAL AND SLOW DRAIN

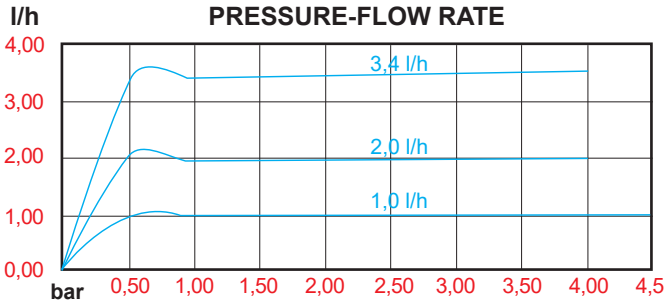
Mainly used in vineyards, orchards, gardens, crops in a row, in undulating terrain, both on the surface and underground. Flat dripper with large turbulent flow path and 17 filtration inputs ensures a high resistance to clogging.
A wide range of pressure compensation (0.8 to 4.3 bar) allows a high performance even in soils characterized by steep elevation changes.

| SUPER DRIP | NORMAL | | SLOW DRAIN | |
|---|---|---|---|---|
| Ø int. mm | 14,2 | 17,5 | 14,2 | 17,5 |
| Ø nom. mm | 16 | 20 | 16 | 20 |
| Coil length mt | 500 | 400 | 500 | 400 |
| Spacing mtcm | Code• | | | |
| 20 | TAG365 | TAG375 | TAG350 | TAG340 |
| 30 | TAG367 | TAG377 | TAG352 | TAG342 |
| 40 | TAG368 | TAG378 | TAG353 | TAG343 |
| 50 | TAG369 | TAG379 | TAG354 | TAG344 |
| 60 | TAG370 | TAG380 | TAG355 | TAG345 |
| 70 | TAG371 | TAG381 | TAG356 | TAG346 |
| 80 | TAG372 | TAG382 | TAG357 | TAG347 |
| 90 | TAG373 | TAG383 | TAG358 | TAG348 |
| 100 | TAG374 | TAG384 | TAG359 | TAG349 |

• Codes refer to 2,0 l/h flow rate

## TECHNICAL DATA

- Pipe thickness 1,0 mm - 40 mils;
- Max pressure 0,5 ÷ 4,3 bar;
- Nominal flow rate of the dripper 2 l/h (on request 1,0 l/h, and 3,4 l/h);
- Filtration suggested 120 mesh.




| SUPER DRIP MAXIMUM LENGTH WITH 0% SLOPE | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Inlet press m.c.a. | Flow rate (l/h) | Ø 16 | | | | | | | Ø 20 | | | | | | |
| | | Spacing within drippers (m) | | | | | | | | | | | | | |
| | | 0.20 | 0.30 | 0.40 | 0.50 | 0.60 | 0.75 | 1.00 | 0.20 | 0.30 | 0.40 | 0.50 | 0.60 | 0.75 | 1.00 |
| 20 | 1,0 | 130 | 184 | 234 | 280 | 323 | 383 | 476 | 215 | 297 | 370 | 437 | 499 | 585 | 717 |
| 30 | | 154 | 218 | 277 | 332 | 383 | 455 | 566 | 255 | 352 | 439 | 519 | 593 | 696 | 853 |
| 35 | | 163 | 232 | 294 | 353 | 407 | 485 | 602 | 271 | 374 | 467 | 552 | 631 | 741 | 908 |
| 20 | 2,0 | 83 | 118 | 149 | 179 | 207 | 246 | 305 | 138 | 190 | 237 | 280 | 320 | 376 | 461 |
| 30 | | 98 | 139 | 178 | 213 | 246 | 293 | 363 | 164 | 226 | 282 | 334 | 381 | 448 | 549 |
| 40 | | 110 | 156 | 199 | 238 | 276 | 328 | 407 | 183 | 253 | 316 | 374 | 427 | 502 | 615 |
| 20 | 3,4 | 63 | 85 | 104 | 122 | 139 | 162 | 196 | 104 | 136 | 165 | 191 | 215 | 249 | 299 |
| 30 | | 78 | 105 | 130 | 152 | 172 | 201 | 244 | 129 | 170 | 205 | 238 | 268 | 309 | 373 |
| 40 | | 89 | 120 | 148 | 174 | 197 | 230 | 279 | 147 | 194 | 235 | 272 | 306 | 354 | 427 |

**FITTING FOR DRIPLINE AND PIPE PE WITH SCREW SEE ON PAGE 23 AND BLACK FITTING FOR DRIPLINE AND PIPE P.E SEE ON PAGE 39.**

## ▶ HIGH TENSILE HOSES FOR AGRICULTURAL APPLICATIONS LAYFLAT

## LAYFLAT

SUN-FLOW

**STND. LENGTH.:** 300 ft. per bale (Special order for longer lengths) - **TEMP. RANGE:** -5°F to 170°F - **APPLICATIONS:** Mines, Construction, Irrigation, etc. **CONSTRUCTION:** 3-Ply Polyester Yarns. Both tube and cover are extruded simultaneously to obtain maximum bonding. - **CAUTION:** For liability purposes, if temperature exceeds 110°F the working pressure will go down. Please check with factory to ensure sufficient safety factor.

**SF-10 BLUE**

| Code | Ø | Ø Int. mm | Approx. wall mm | Max working pressure Bar at 20° C | Design burst pressure Bar at 20° C | Coil lenght mt | Approx. weight kg/m |
|---|---|---|---|---|---|---|---|
| TMN501 | 2" | 53,1 | 1,5 | 5,50 | 16,55 | 100 | 0,422 |
| TMN502 | 2"½ | 65,0 | | 4,50 | 13,79 | | 0,462 |
| TMN503 | 3" | 78,0 | 1,6 | 5,50 | 16,55 | | 0,586 |
| TMN504 | 4" | 104,9 | 1,7 | 4,80 | 14,48 | | 0,819 |
| TMN505 | 5” | 128,0 | 1,8 | 2,76 | 8,96 | | 0,970 |
| TMN506 | 6" | 156,5 | 1,9 | 4,14 | 13,79 | | 1,316 |
| TMN508 | 8" | 207,0 | 2,2 | 2,41 | 6,89 | | 1,935 |

**SF-55 GREY**

| Code | Ø | Ø Int. mm | Approx. wall mm | Max working pressure Bar at 20° C | Design burst pressure Bar at 20° C | Coil lenght mt | Approx. weight kg/m |
|---|---|---|---|---|---|---|---|
| TMN550 | 2“ | 52,8 | 2,2 | 10,34 | N.D. | 100 | 0,536 |
| TMN552 | 3" | 78,0 | 2,5 | | | | 0,962 |
| TMN553 | 4" | 104,9 | 2,9 | 6,89 | | | 1,389 |
| TMN554 | 5“ | 128,8 | 3,3 | | | | 1,984 |
| TMN555 | 6" | 154,9 | 3,7 | | | | 2,480 |

**SF-20 GREEN**

| Code | Ø | Ø Int. mm | Approx. wall mm | Max working pressure Bar at 20° C | Design burst pressure Bar at 20° C | Coil lenght mt | Approx. weight kg/m |
|---|---|---|---|---|---|---|---|
| TMN600 | 1"½ | 41,0 | 2,3 | 12,00 | 43,40 | 91,4 | 0,309 |
| TMN601 | 2” | 53,1 | 2,5 | | | | 0,540 |
| TMN602 | 2”½ | 65,0 | | | 36,50 | | 0,600 |
| TMN603 | 3" | 78,0 | 3,0 | | 41,30 | | 1,000 |
| TMN604 | 4" | 104,0 | 4,0 | | | | 1,700 |
| TMN605 | 6” | 154,0 | 5,0 | | | | 3,280 |
| TMN606 | 8" | 208,0 | 6,0 | | | | 5,100 |

## TD-FLAT / TN-FLAT / TR-FLAT

NEW

**TD-FLAT**

| Code | Ø | Ø Int. mm | Approx. wall mm | Max working pressure Bar at 20° C | Design burst pressure Bar at 20° C | Coil lenght mt | Approx. weight kg/m |
|---|---|---|---|---|---|---|---|
| TMN620 | 2” | 52 | 1,20 | 4 | 12 | 100 | 0,27 |
| TMN623 | 3” | 78 | 1,40 | 3 | 10 | | 0,38 |
| TMN624 | 4” | 103 | 1,40 | | | | 0,53 |
| TMN625 | 5” | 128 | 1,75 | | 9 | | 0,86 |
| TMN626 | 6” | 154 | 2,00 | | | | 1,00 |

**TN-FLAT**

| Code | Ø | Ø Int. mm | Approx. wall mm | Max working pressure Bar at 20° C | Design burst pressure Bar at 20° C | Coil lenght mt | Approx. weight kg/m |
|---|---|---|---|---|---|---|---|
| TMN630 | 2” | 52 | 1,70 | 10 | 30 | 100 | 0,33 |
| TMN631 | 2”½ | 66 | 1,75 | | | | 0,40 |
| TMN632 | 3” | 78 | 2,10 | 6 | | | 0,67 |
| TMN633 | 4” | 104 | 2,00 | | 18 | | 0,78 |
| TMN634 | 5” | 128 | 2,30 | | | | 1,00 |
| TMN635 | 6” | 156 | | | | | 1,32 |

**TR-FLAT**

| Code | Ø | Ø Int. mm | Approx. wall mm | Max working pressure Bar at 20° C | Design burst pressure Bar at 20° C | Coil lenght mt | Approx. weight kg/m |
|---|---|---|---|---|---|---|---|
| TMN640 | 2”½ | 66 | 2,30 | 16 | 48 | 100 | 0,66 |
| TMN641 | 3” | 78 | 2,35 | | | | 0,72 |

# LAYFLAT FITTINGS - TAPE - MICROSPRINKLERS

| FITTING | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Description | | Ø Tape/pipe | Ø Connect | Ø Hole | Ø Insert key | Pic. | Code | Pack |
| Starter | for tape | mm 16 | | mm 19 | ⅜" | A | RMP608 | 100 |
| | | mm 22 | | mm 14 | mm 10 | B | RLF050 | |
| | | mm 16 | | | | C | RLF024 | |
| | | mm 22 | | | | | RLF025 | |
| | | mm 16 | ½" | mm 19 | ⅜" | D | RLF007 | |
| | | mm 22 | | | | | RLF008 | |
| | microsprinklers | mm 10 | | mm 14 | mm 7 | E | RLF001 | |
| | conic insert for stand | | ¾" | | | F | RLF010 | |
| | | | | mm 19 | | G | RLF009 | |
| | thread F | | | mm 14 | | H | RLF013 | |
| | | | | mm 19 | mm 13 | I | RLF014 | |
| | from pipe PE to tape | mm 16 | | | | L | RMP614 | |
| | | | extention cm 30 | | | M | RMP809 | |
| | | | extention cm 46 | | | | RMP813 | |
| | | | extention cm 61 | | | | RMP812 | |
| | from pipe PE to tape T-SAL | | | | | N | RMP616 | |
| | | mm 22 | | | | | RMP618 | |
| Accessories for insert starter Pe | | | | | | O | RMP670 | |
| Coupling for tape T-SAL | | mm 16 | | | | P | RMP611 | |
| | | mm 19 | | | | | RMP612 | |
| | | mm 22 | | | | | RMP650 | |
| Fitting thread M/tape T-SAL | | mm 16 | ¾" | | | Q | RMP620 | |
| | | mm 19 | | | | | RMP621 | |
| | | mm 22 | | | | | RMP775 | |
| Male fitting with floating ring for tape T-SAL | | mm 16 | ¾" | | | R | RMP777 | |
| | | mm 22 | | | | | RMP776 | |
| Coupling for tape floating ring for tape T-SAL | | mm. 16 | | | | S | RMP626 | |
| | | mm. 22 | | | | | RMP627 | |

| INSTRUMENTS | | | | | | | |
|---|---|---|---|---|---|---|---|
| Description | | | Ø Hole | Ø Insert key | Pic. | Code | Pack |
| Drill pipe | ORANGEPUNLF 14 for Layflat | | mm 14 | | P | OAF300 | 1 |
| | BLUE PUNLF 19 for Layflat | | mm 19 | | | OAF301 | |
| | GREEN PG-HP B400 for PE | | mm 6 | | Q | OAF250 | |
| Black key to insert Layflat LFDRS fitting | | | | mm 7 | R | OAF310 | |
| | | | | mm 10 | | OAF312 | |
| Allen key to insert Layflat fitting | | corner | | mm13 | S | OAF314 | |
| | | T shape | | ⅜" | T | OAF311 | |
| Layflat end line clamp saddle | | 2" ÷ 4" | | | U | FPF050 | |
| | | 4" ÷ 6" | | | | FPF051 | |

**TAPE MINIVALVES SEE ON PAGE PAGINA 52**

## LAYFLAT FITTINGS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Female Quill | Ø | 2" - 50 x 60 | 3" - 76 x 80 | 4" - 104 x 100 | 5" - 125 x 120 | 6" - 150 x 150 |
| | | Cod | ACN037 | ACN039 | ACN040 | ACN220 | ACN114 |
| | Male Quill | Ø | 50 x 60 - 2" | 76 x 80 - 3" | 104 x 100 - 4" | 125 x 120 - 5" | 150 x 150 - 6" |
| | | Cod | ACN007 | ACN009 | ACN010 | ACN210 | ACN185 |
| PVC PE | Coupling rubber pipe in PVC and PE | Ø | 53 - 2" | 75 - 3" | 104 - 4" | 127 - 5" | 156 - 6" |
| | | PVC | RGL042 | RGL001 | RGL002 | RGL003 | RGL005 |
| | | PE | RGL200 | RGL202 | RGL203 | RGL204 | RGL205 |
| NEW PVC PE | Male quill rubber pipe in PVC and PE | Ø | 1"½ x 1"½ m | 2" x 2" m | 2"½ x 2"½ m | 3" x 2"½ m | 3" x 3" m |
| | | PVC | RGL007 | RGL008 | RGL009 | | RGL010 |
| | | PE | | RGL215 | RGL218 | RGL222 | RGL223 |
| | | Ø | 3" x 4" m | 4" x 3" m | 4" x 4" m | 5" x 4" m | 5" x 5" m |
| | | PVC | | | RGL011 | | RGL013 |
| | | PE | RGL224 | RGL227 | RGL228 | RGL229 | RGL230 |
| | | Ø | 6" x 5" m | 6" x 6" m | | | |
| | | PVC | | RGL012 | | | |
| | | PE | RGL231 | | | | |
| | Female quill rubber pipe in PVC | Ø | 1"½ | 2" | 2"½ | 3" | 4" |
| | | PVC | RGL015 | RGL016 | RGL017 | RGL018 | RGL019 |
| | | Ø | 5" | 6" | | | |
| | | PVC | RGL014 | RGL030 | | | |
| | Reducer coupling in PE | Ø | 2" x 3" | 3" x 4" | 4" x 5" | 4" x 6" | 5" x 6" |
| | | PE | RGL207 | RGL211 | RGL212 | RGL213 | RGL214 |
| NEW | Cap end of line in PE | Ø | 2" | 2"½ | 3" | 4" | 5" |
| | | PE | RGL235 | RGL236 | RGL237 | RGL238 | RGL239 |
| | | Ø | 6" | | | | |
| | | PE | RGL240 | | | | |
| | Elbow rubber pipe in PVC | Ø | 1"½ | 2" | 2"½ | 3" | 4" |
| | | PVC | RGL031 | RGL032 | RGL033 | RGL034 | RGL035 |
| | | Ø | 5" | 6" | | | |
| | | PVC | RGL036 | RGL037 | | | |
| | T rubber pipe in PVC | Ø | 1"½ | 2"½ | 3" | 4" | 6" |
| | | PVC | RGL022 | RGL023 | RGL020 | RGL021 | RGL027 |
| | PVC "T 2" female threaded deriv. hose adaptor | Ø | 4" x 4" x 2" | 5" x 5" x 2" | | | |
| | | PVC | RGL025 | RGL026 | | | |
| | PVC "T 2"male threaded deriv. hose adaptor | Ø | 4" x 4" x 2" | | | | |
| | | PVC | RGL064 | | | | |
| | T hose for flange for hose | Ø | 4" x DN100 x 4" | 4" x DN150 x 4" | | | |
| | | Cod | ATE119 | ATE120 | | | |
| | Vertical offset sf-M for flange for sf-F | Ø | sf-M150 x DN150 x sf-F150 | | | | |
| | | Cod | ADS302 | | | | |
| | Fascette stringitubo a vite inox W2 - 9mm | Ø | 15 ÷ 25 | 25 ÷ 45 | 40 ÷ 60 | | |
| | | Cod | FFT160 | FFT161 | FFT162 | | |
| | Metal strenghtened | Ø | 2" - 50,5 ÷ 56,0 | 2"½ - 60 ÷ 68 | 3" - 76,5 ÷ 84,0 | 4" - 98 ÷ 108 | 5" - 124 ÷ 132 |
| | | Cod | FFT406 | FFT401 | FFT402 | FFT403 | FFT404 |
| | | Ø | 6" - 145 ÷ 160 | 2"-SF-55-53÷60 | 5"-SF-55-125÷140 | 6"-SF-55-155÷170 | |
| | | Cod | FFT405 | FFT411 | FFT415 | FFT416 | |
| | Strenghtened hose clamp | Ø | 2" - 52 ÷ 55 | 2"½ - 64 ÷ 67 | 3" - 79 ÷ 86 | 4" - 104 ÷ 112 | 5"-SF-55-131÷140 |
| | | Cod | FFT310 | FFT311 | FFT315 | FFT320 | FFT322 |
| | | Ø | 5" - 122 ÷ 130 | 6" - 149 ÷ 161 | | | |
| | | Cod | FFT323 | FFT324 | | | |
| | Threaded flange female PFA 16• | Ø | DN80 x 3" | DN100 x 4" | DN125 x 5" | | |
| | | Cod | FFA812 | FFA813 | FFA143 | | |

• On request available flanges solder PFA 16 PFA 6 and bolts

## ▶ GALVANIZED FITTING

| | Description | Code | Ø |
|---|---|---|---|
| | Female joint ball galvanized rubber pipe | AGF001 | 60 mm |
| | | AGF002 | 80 mm |
| | | AGF003 | 100 mm |
| | | AGF004 | 120 mm |
| | | AGF005 | 150 mm |
| | Male joint ball galvanized rubber pipe | AGM001 | 60 mm |
| | | AGM002 | 80 mm |
| | | AGM003 | 100 mm |
| | | AGM004 | 120 mm |
| | | AGM005 | 150 mm |
| | Female joint ball galvanized with thread | ASZ003 | 60 mm x 2” |
| | | ASZ006 | 80 mm x 2”½ |
| | | ASZ004 | 80 mm x 3” |
| | | ASZ101 | 100 mm x 3” |
| | | ASZ005 | 100 mm x 4” |
| | | ASZ002 | 120 mm x 4” |
| | | ASZ007 | 120 mm x 5” |
| | Male joint ball galvanized with thread | ASZ016 | 60 mm x 2” |
| | | ASZ014 | 80 mm x 2”½ |
| | | ASZ015 | 80 mm x 3” |
| | | ASZ012 | 100 mm x 3” |
| | | ASZ018 | 100 mm x 4” |
| | | ASZ013 | 120 mm x 4” |
| | | ASZ019 | 120 mm x 5” |
| | Bend ball galvanized M/F 90° | ACZ001 | 60 mm |
| | | ACZ002 | 80 mm |
| | | ACZ003 | 100 mm |
| | | ACZ004 | 120 mm |
| | | ACZ005 | 150 mm |
| | Bend ball galvanized M/F 45° | ACZ050 | 60 mm |
| | | ACZ051 | 80 mm |
| | | ACZ052 | 100 mm |
| | | ACZ053 | 120 mm |
| | | ACZ054 | 150 mm |
| | Female joint ball galvanized with flange | ASZ901 | 60 mm x DN65 |
| | | ASZ900 | 80 mm x DN80 |
| | | ASZ902 | 100 mm x DN100 |
| | | ASZ903 | 120 mm x DN120 |
| | | ASZ904 | 150 mm x DN150 |
| | Male joint ball galvanized with flange | ASZ890 | 60 mm x DN65 |
| | | ASZ893 | 80 mm x DN80 |
| | | ASZ894 | 100 mm x DN100 |
| | | ASZ895 | 120 mm x DN120 |
| | | ASZ896 | 150 mm x DN150 |
| | Male joint ball galvanized with free standing male 1” | ASZ050 | 80 mm x 3 “x 1” |
| | | ASZ051 | 100 mm x 4 “x ¾” |
| | | ASZ057 | 120 mm x 4 “x 1” |
| | Female joint ball galvanized with free standing Female 1” | ASZ060 | 80 mm x 3 “x 1” |
| | | ASZ061 | 100 mm x 4 “x ¾” |
| | | ASZ067 | 120 mm x 4 “x 1” |
| | Double bend galvanized M/F | ACD001 | 60 mm |
| | | ACD002 | 80 mm |
| | | ACD003 | 100 mm |
| | | ACD004 | 120 mm |
| | | ACD005 | 150 mm |
| | Reduction galvanized | ARD003 | 120 mm Fx100 mm M |
| | | ARD009 | 120mm Mx100 mm F |
| | | ARD006 | 150mm Fx120 mm M |
| | | ARD033 | 100mm Mx80mm F |
| | | ARD032 | 100mm Mx80mm M |
| | | ARD005 | 150mm Mx120mm F |

| Description | Code | Ø | |
|---|---|---|---|
| Offtake galvanized 90° MF | ADS150 | 60 mm | |
| | ADS151 | 80 mm | |
| | ADS152 | 100 mm | |
| | ADS149 | 120 mm | |
| | ADS154 | 150 mm | |
| Offtake galvanized bend Mf | ADS155 | 60 mm | |
| | ADS156 | 80 mm | |
| | ADS157 | 100 mm | |
| | ADS158 | 120 mm | |
| | ADS159 | 150 mm | |
| Male ball plug galvanized F | ATP001 | 60 mm | |
| | ATP002 | 80 mm | |
| | ATP003 | 100 mm | |
| | ATP004 | 120 mm | |
| | ATP005 | 150 mm | |
| Rubber bar suction pipe mt 2 with M/F fittings | TGO050 | 60 mm | |
| | TGO051 | 80 mm | |
| | TGO052 | 100 mm | |
| | TGO053 | 120 mm | |
| | TGO054 | 150 mm | |
| PFA15 bar supply hose mt 2 with M/F fittings | TGO014 | 60 mm | |
| | TGO015 | 80 mm | |
| | TGO016 | 100 mm | |
| | TGO017 | 120 mm | |
| | TGO018 | 150 mm | |
| Reinforced rubber bar suction pipe mt 2 | TGO001 | 60 mm | |
| | TGO002 | 80 mm | |
| | TGO003 | 100 mm | |
| | TGO004 | 120 mm | |
| | TGO005 | 150 mm | |
| PFA15 per m supply hose | TGO100 | 60 mm | |
| | TGO101 | 80 mm | |
| | TGO102 | 100 mm | |
| | TGO103 | 120 mm | |
| Footvalve galvanized M | AVF001 | 60 mm | |
| | AVF002 | 80 mm | |
| | AVF003 | 100 mm | |
| | AVF004 | 120 mm | |
| | AVF005 | 150 mm | |
| Head hydrant aluminum bayonet (optional attack harpoon) | ATI001 | 60 mm x 2” | bayonet harpoon |
| | ATI002 | 80 mm x 3” | |
| | ATI003 | 100 mm x 4” | |
| | ATI004 | 120 mm x 5” | |
| Curve hydrant aluminum bayonet (optional attack harpoon) | ACI010 | 60 mm x 2” | |
| | ACI011 | 80 mm x 3” | |
| | ACI012 | 100 mm x 4” | |
| | ACI013 | 120 mm x 5” | |
| Flanged conical reduction (available with junction male threaded 3/4 “or 1”) | FCL254 | DN150 x DN100 | |
| | FCL213 | DN150 x DN125 | |
| | FCL253 | DN125 x DN100 | |
| | FCL282 | DN125 x DN80 | |
| | FCL283 | DN100 x DN80 | |
| Ball couplings rubber seals | AGS001 | 60 mm | |
| | AGS002 | 80 mm | |
| | AGS003 | 100 mm | |
| | AGS004 | 120 mm | |
| Ring couplings rubber seals | AGR001 | 60 mm | |
| | AGR002 | 80 mm | |
| | AGR003 | 100 mm | |
| | AGR004 | 120 mm | |
| PFA10 flange rubber seals | RNG150 | DN65 | |
| | RNG110 | DN85 | |
| | RNG112 | DN100 | |
| | RNG113 | DN125 | |

## ► PRESSURE REGULATORS

### REDUCER PRESSURE REGOLABLE

| RIDUTTORI DI PRESSIONE BERMAD | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Flow Range m³/h | | Press range Bar | | |
| | Code | Ø | Connections | Q min | Q max | P min | P max | Colour sprin |
| | FRP200 | ¾” | M/F | 0,20 | 5 | 0,8 | 2,5 | Bianco |
| | FRP201 | | | | | 2 | 4 | Rosso |
| | FRP209 | 1” | F | 0,45 | 7 | 1 | 2 | |
| | FRP210 | | | | | 1,5 | 3,5 | Nero |
| | FRP221 | 1”½ | | 0,45 | 18 | 1 | 2 | Rosso |
| | FRP222 | | | | | 1,5 | 3,5 | Nero |

On request available versions for low flow or to different pressure adjustment range

### GAUGE FOR MEASURING THE PRESSURE

| Code | Type | Connection | Range |
|---|---|---|---|
| FMO030 | Manometer with glycerin | ¼” | 0 ÷ 6 bar |
| FMO035 | | | 0 ÷ 12 bar |

• On request other models

## ► MICRO AND MINI SPRINKLERS, FOGGER AND ACCESSORIES

### MINI SPRINKLERS COMPENSATING

The C-profile allows a uniform water distribution.
Ideal for parks and gardens but also for agricultural applications.
120 mesh filtration required.

| Code | Description | Color | Ø mm Nozzle | L/h | Pack |
|---|---|---|---|---|---|
| OGC225 | Stream Flat Jet standard sprayers | Black | 0,80 | | 1 |
| OGC226 | | Brown | 0,90 | | |
| OGC227 | | Blue | 1,00 | | |
| OGC228 | | Green | 1,30 | | |
| OGC229 | | Red | 1,50 | | |
| OGC230 | Stream Flat Jet pressure self compensating sprayers | Black | 0,90 | 20 | |
| OGC231 | | Orange | 1,25 | 30 | |
| OGC232 | | Blue | 1,30 | 40 | |
| OGC233 | | Purple | 1,45 | 50 | |
| OGC234 | | Green | 1,55 | 55 | |
| OGC235 | | Red | 1,65 | 80 | |

# MICROSPRINKLERS AVERAGE FLOW RONDO

The sprinkler Rondo medium-range is an ideal solution for orchards, greenhouses, horticultural crops and gardens with a single arc. Rondo provides light jets and drops constant regardless of the type of installation: upside down in greenhouses and under the canopy in orchards or upright pole in vegetable crops. Rondo is available with several optional accessories, including the plug “snap-fi t” anti-insect and several baffles, which provide additional protection and types of specific jet.

**PERFORMANCES**

| Nozzle colour | Nozzle mm | Flow l/h | Ø wet mt spinner | | | | Radius mt deflectors | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Black•• | Purple•• | Green••• | Blue | 2x30° | 90° | 180° |
| Sky Blue | * | 30 | 6,5 | 4,4 | 7,4 | 5,2 | n.d. | n.d. | n.d. |
| Black | 0,85 | 39 | 5,8 | 4,6 | 8,6 | 6,8 | 2,1 | 2,5 | 2,3 |
| Blue | 1,00 | 51 | 6,6 | 5,0 | 8,6 | 7,4 | 2,2 | 2,8 | 2,6 |
| Dark Blue | 1,10 | 64 | 7,6 | 5,4 | 8,6 | 7,4 | 2,3 | 3,5 | 2,7 |
| Green | 1,20 | 75 | 8,8 | 5,2 | 9,8 | 8,0 | 2,4 | 3,6 | 2,8 |
| Red | 1,40 | 102 | 9,4 | 5,6 | 10,6 | 8,6 | 2,5 | 4,0 | 3,0 |
| White | 1,60 | 132 | 10,0 | 7,2 | 10,8 | 8,6 | 2,6 | 4,2 | 2,9 |
| Purple | 1,80 | 174 | 10,5 | 7,6 | 11,2 | 9,2 | 2,8 | 5,0 | 3,0 |
| Yellow | 2,00 | 205 | 11,0 | 8,0 | 11,4 | 9,6 | 3,0 | 5,6 | 3,1 |
| Brown | 2,20 | 254 | 11,0 | 8,6 | 11,2 | 9,6 | 3,3 | 6,1 | 3,3 |
| Orange | 2,40 | 298 | 11,0 | 9,0 | 10,6 | 9,6 | 3,6 | 6,1 | 3,5 |

Inlet pressure 2 bar

• Sky Blue: only nozzle threaded 5,0 mm

•• Vertical position: 25 cm over the earth

••• Upside down: 200 cm over the earth

**N° MAX REQUIRED OF MICROSPRINKLERS ON THE ROWS**

| Nozzle•• | Ø ext. pipe mm | Spacing sprinkler on lines mt | | | | | |
|---|---|---|---|---|---|---|---|
| | | 3 | 4 | 5 | 6 | 7 | 8 |
| Sky Blue | 16 | 21 | 19 | 17 | 16 | 15 | 15 |
| | 20 | 32 | 29 | 27 | 25 | 24 | 23 |
| Black | 16 | 20 | 18 | 16 | 15 | 14 | 13 |
| | 20 | 31 | 27 | 25 | 24 | 22 | 21 |
| Blue | 16 | 16 | 14 | 13 | 12 | 11 | 11 |
| | 20 | 25 | 22 | 21 | 19 | 18 | 17 |
| Dark Blue | 16 | 13 | 12 | 11 | 10 | 10 | 9 |
| | 20 | 21 | 19 | 17 | 16 | 15 | 14 |
| Green | 16 | 12 | 10 | 10 | 9 | 8 | 8 |
| | 20 | 18 | 17 | 15 | 14 | 13 | 13 |
| Red | 16 | 10 | 8 | 8 | 7 | 7 | 6 |
| | 20 | 15 | 13 | 12 | 12 | 11 | 10 |
| White | 16 | 8 | 7 | 6 | 6 | 6 | 5 |
| | 20 | 13 | 11 | 10 | 10 | 9 | 9 |
| Purple | 20 | 10 | 9 | 8 | 8 | 7 | 7 |
| | 25 | 15 | 14 | 13 | 12 | 11 | 11 |
| | 32 | 24 | 22 | 20 | 19 | 18 | 17 |
| Yellow | 20 | 9 | 8 | 7 | 7 | 6 | 6 |
| | 25 | 14 | 13 | 12 | 11 | 10 | 10 |
| | 32 | 22 | 20 | 18 | 17 | 16 | 15 |
| Brown | 20 | 8 | 7 | 6 | 6 | 5 | 5 |
| | 25 | 12 | 11 | 10 | 10 | 9 | 9 |
| | 32 | 19 | 17 | 16 | 15 | 14 | 13 |
| Orange | 20 | 7 | 6 | 6 | 5 | 5 | 5 |
| | 25 | 11 | 10 | 9 | 9 | 8 | 8 |
| | 32 | 17 | 15 | 14 | 13 | 12 | 12 |

•• Vertical position: 25 cm over the earth

# RONDO AND FLF FOGGERS

Ideal for irrigation, seed germination and propagation by cuttings.
The nebulization produced can be used to control the climate or to adjust the humidity in the greenhouses.

**RONDO NEBULIZER:**
Flow rate at 3.0 bar: 47 or 61 l / h
**Operating pressure range:** 2.5-4.0 bar
Ultra female conical nozzle: can be connected to mini-check valve with male outlet
**Average drop size:** 150 microns
For operating pressure greater than 3.5 bar, use the mini-H high-pressure check valve.
**Applications:** Propagation by cuttings in nurseries and seed germination

**MAX N° OF REQUESTED FOGGERS IN THE IRRIGATION LINE**

| Nozzle colour | Nozzle mm | Flow Rate l/h• | Wet Ø mt• | Ø ext. pipe mm | Spacing within foggers mt | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 0,7 | 0,9 | 1,0 | 1,2 | 1,5 | 1,6 |
| Black | 0,85 | 47 | 2 | 16 | 30 | 28 | 28 | 26 | 25 | 25 |
| | | | | 20 | 51 | 48 | 47 | 44 | 42 | 41 |
| Blue | 1,00 | 61 | | 16 | 24 | 22 | 22 | 21 | 20 | 20 |
| | | | | 20 | 41 | 38 | 37 | 35 | 33 | 32 |

• A 3,0 bar, position upside down, 70 cm over the earth

**FLF fogger:** flowrate coded from 2 colours to 3,5 bar: light blue (5,4) and dark blue (10,5 l/h) ● **pressure range**: 3,5 ÷ 5,0 bar ● average drops size: 70 micron ● **nodrain valve**: opening pressure: 3,5 bar ● closing pressure: 1,4 bar

1 output

2 output

4 output

| FLF Fogger – N. MAX MICROSPRINKLERS ON THE LINE● | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Flow rate l/h | | Ø ext. | Distance within foggers on the line mt | | | | | | |
| Code | Name | Output configuration | Connection | Single output | Total | pipe mm | 0,5 | 0,6 | 0,7 | 0,8 | 1,00 | 1,25 | 1,50 |
| ONB010 | FLF●● | 1 | Conic male | 5,4 | 5,4 | 16 | 78 | 88 | 97 | 105 | 121 | 139 | 156 |
| | | | | | | 20 | 114 | 127 | 141 | 153 | 176 | 203 | 228 |
| ONB011 | | | | 10,5 | 10,5 | 16 | 48 | 54 | 60 | 65 | 74 | 85 | 96 |
| | | | | | | 20 | 70 | 79 | 87 | 94 | 108 | 125 | 140 |
| ONB012 | | 2 | Conic female | 5,4 | 10,8 | 16 | 50 | 56 | 62 | 68 | 78 | 90 | 101 |
| | | | | | | 20 | 74 | 82 | 91 | 98 | 114 | 131 | 147 |
| ONB013 | | | | 10,5 | 21,0 | 16 | 32 | 36 | 39 | 43 | 49 | 56 | 63 |
| | | | | | | 20 | 47 | 52 | 57 | 62 | 72 | 84 | 93 |
| ONB014 | | 4 | | 5,4 | 21,6 | 16 | 32 | 36 | 40 | 43 | 50 | 58 | 65 |
| | | | | | | 20 | 47 | 53 | 58 | 63 | 73 | 84 | 95 |
| ONB015 | | | | 10,5 | 42,0 | 16 | 20 | 22 | 25 | 26 | 31 | 35 | 39 |
| | | | | | | 20 | 29 | 33 | 36 | 39 | 45 | 53 | 59 |
| OSA118 | Stand 35 cm PVC tube 4/7 with fittings + stabilizer | | | | | | For FLF Single | | | | | | |
| OSA114 | | | | | | | For FLF 2-Output and 4-Output | | | | | | |

● **With min pressure 3,5 bar and flowrate range on the line 10%**

●● **Nodrain valve to be ordered separately**

## SELF COMPENSATING MICROSPRINKLER RFR

The micro-sprinkler has the main characteristics of the standard microsprinkler Rondo with the addition of the flow adjustment to ensure a constant flow rate even in the most challenging topographical conditions. Due to the low flow rate drops to read and farmers can reduce the loss of soil penetrable. An anti insect hood helps to protect sprinklers from the clogging caused by insects. The materials with high performance resist the degradation caused by ultraviolet rays and the damage caused by chemicals and fertilizers used in agriculture.
Given that the range of operating pressure is between 1.5 and 3.5 bar, it is used in irrigation canopy on slopes or where long lines are needed.

| MAX N° OF MICROSPRINKLERS REQUIRED ON IRRIGATION LINES | | | | | | Ø ext. pipe mm | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 16 | | | | | 20 | | | | |
| | | | | | | Inlet pressure line bar | | | | | | | | | |
| Nozzle colour | Nozzle mm | Flow l/h● | Code | Ø wet mt | Spacing microsprinklers mt | 1,6 | 2,0 | 2,5 | 3,0 | 3,5 | 1,6 | 2,0 | 2,5 | 3,0 | 3,5 |
| Black | 0,85 | 23 | | 4,0 | 3 | 15 | 27 | 34 | 40 | 44 | 23 | 42 | 51 | 62 | 69 |
| | | | | | 4 | 14 | 25 | 31 | 37 | 41 | 21 | 38 | 47 | 56 | 63 |
| | | | | | 5 | 13 | 23 | 29 | 34 | 38 | 20 | 35 | 44 | 52 | 58 |
| | | | | | 6 | 12 | 21 | 28 | 32 | 35 | 18 | 33 | 40 | 49 | 55 |
| Blue | 1,00 | 30 | | 5,5 | 3 | 13 | 24 | 31 | 36 | 39 | 20 | 36 | 47 | 54 | 60 |
| | | | | | 4 | 12 | 21 | 28 | 32 | 36 | 18 | 33 | 42 | 49 | 54 |
| | | | | | 5 | 11 | 20 | 25 | 30 | 33 | 17 | 30 | 39 | 45 | 50 |
| | | | | | 6 | 10 | 19 | 24 | 28 | 31 | 16 | 28 | 36 | 42 | 47 |
| Dark Blue | 1,10 | 41 | | 5,7 | 3 | 11 | 20 | 25 | 29 | 32 | 17 | 30 | 38 | 45 | 50 |
| | | | | | 4 | 10 | 18 | 22 | 26 | 29 | 15 | 27 | 34 | 40 | 45 |
| | | | | | 5 | 9 | 16 | 21 | 24 | 27 | 14 | 25 | 32 | 37 | 41 |
| | | | | | 6 | 8 | 15 | 19 | 23 | 25 | 13 | 23 | 30 | 35 | 38 |
| Green | 1,20 | 53 | | 6,4 | 3 | 9 | 17 | 21 | 25 | 27 | 14 | 25 | 32 | 38 | 42 |
| | | | | | 4 | 8 | 15 | 19 | 22 | 25 | 13 | 23 | 29 | 34 | 38 |
| | | | | | 5 | 8 | 14 | 17 | 21 | 23 | 12 | 21 | 27 | 31 | 35 |
| | | | | | 6 | 7 | 13 | 16 | 19 | 21 | 11 | 20 | 25 | 29 | 33 |
| Red | 1,40 | 70 | | 8,0 | 3 | 8 | 14 | 18 | 21 | 23 | 12 | 21 | 27 | 32 | 35 |
| | | | | | 4 | 7 | 13 | 16 | 19 | 21 | 11 | 29 | 25 | 29 | 32 |
| | | | | | 5 | 6 | 12 | 14 | 17 | 19 | 10 | 18 | 23 | 26 | 29 |
| | | | | | 6 | 6 | 11 | 13 | 16 | 18 | 9 | 17 | 21 | 25 | 27 |
| White | 1,60 | 95 | | 8,4 | 3 | 5 | 10 | 13 | 15 | 17 | 9 | 16 | 20 | 24 | 27 |
| | | | | | 4 | 5 | 9 | 11 | 14 | 15 | 8 | 14 | 18 | 22 | 24 |
| | | | | | 5 | 4 | 8 | 10 | 13 | 14 | 7 | 13 | 17 | 20 | 22 |
| | | | | | 6 | 4 | 8 | 10 | 12 | 13 | 7 | 12 | 16 | 19 | 21 |

● With spinner grey and nozzle 25 cm over the earth

## RONDO AND RFR LIST OF COMBINATION AND CODES

| Colour nozzle | L/H | RONDO ⅜" threaded | RONDO ⅜" upsidedown | RONDO ⅜" threaded with anti insect | Colour nozzle | L/H | RFR ⅜" Threaded comp. | RFR ⅜" threaded Comp. upside down | RFR ⅜" Threaded comp. Anti insect |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| | | SPINNER | | | | | SPINNER | | |
| | | Black | Green | Black | | | Grey | Red | Grey |
| Black | 39 | OSR160 | OSR757 | | Black | 23 | OSR189 | OSR280 | OSR195 |
| Blue | 51 | | | OSR177 | Blue | 30 | OSR190 | OSR281 | OSR196 |
| Dark Blue | 64 | OSR161 | OSR758 | OSR178 | Dark Blue | 41 | OSR191 | OSR282 | OSR197 |
| Green | 75 | | OSR759 | OSR179 | Green | 53 | OSR192 | OSR283 | OSR198 |
| Red | 102 | OSR162 | OSR760 | OSR180 | Red | 70 | OSR193 | OSR284 | OSR199 |
| White | 132 | OSR163 | OSR761 | OSR181 | White | 95 | OSR194 | OSR285 | OSR159 |
| Purple | 174 | OSR164 | OSR762 | OSR182 | | | | | |
| Yellow | 205 | OSR165 | OSR763 | OSR183 | | | | | |
| Brown | 254 | OSR166 | OSR764 | | | | | | |
| Orange | 298 | OSR167 | OSR765 | | | | | | |

## ACCESSORIES FOR MICROSPRINKLERS RONDO AND RFR

| Description | | | Code | Pack |
|---|---|---|---|---|
| Nodrain valve | Low pressure (0.6 bar open - 2.0 bar close) bidirectional flux | Thread x Conic M | OSA110 | 1 |
| | | 4/7 x Conic M | OSA117 | |
| | High pressure (1.4 bar open - 3.5 bar close) unidirectio-nal flux | Thread x Conic M | OSA118 | |
| | | 4/7 x Conic M | OSA120 | |
| Adaptor for Rondo/RFR/ SuperXL | Meteor44 | IN 4/7 x OUT ⅜" F | OSA100 | |
| | Meteor75 | IN ⅛" x OUT ⅜" F | OSA115 | |
| | Meteor17 self compensating 2,5 bar | IN 10/12 x OUT ⅜" F | OSA116 | |
| Stabilizer | | | OSA103 | |

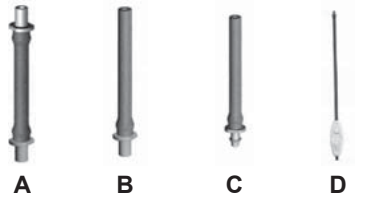
**Nodrain valve**

**4/7 x Conic M**

**Thread x Conic M**

**Adaptor Meteor**

| Description | | Pic. | Code | Pack |
|---|---|---|---|---|
| Assembled stand for Rondo/RFR | 60cm Pipe PE 4/7 + fitting IN/OUT Conic M | A | OSA106 | 1 |
| | 60cm Pipe PE 4/7 + fitting OUT Conic M | B | OSA108 | |
| | 60cm Pipe PE 4/7 + fitting IN 4/7 | C | OSA112 | |
| | 35 cm Pipe PVC 4/7 + fitting IN 4/7 x OUT conic M + stabilizer | D | OSA114 | |
| Fitting | 4/7 x 4/7 | E | RMP880 | 100 |
| | 4/7 x male | F | RMP881 | |
| | Ø 4/7 x female | G | RMP882 | |
| | Ø 4/7 x ⅜ | H | RMP883 | |



**A** **B** **C** **D**

**E** **F** **G** **H**

**MICROPIPE SEE ON PAGE 45**

## RONDO LIST OF COMBINATION AND CODES

| | Description | Colour nozzle | L/H | Code | | Description | Colour nozzle | L/H | Code |
|---|---|---|---|---|---|---|---|---|---|
| | • ⅜" threaded<br>• Meteor 44<br>• Rod Cantal<br>• Pipe PE 4/7 60 cm with fitting<br>• Black Spinner | Black | 39 | OSA001 | | • RFR<br>• ⅜" threaded<br>• Meteor 44<br>• Rod Cantal<br>• Pipe PE 4/7 60 cm with fitting<br>• Grey Spinner | Black | 23 | OSA018 |
| | | Blue | 51 | OSA002 | | | Blue | 30 | OSA019 |
| | | Dark Blue | 64 | OSA003 | | | Dark Blue | 41 | OSA020 |
| | | Green | 75 | OSA004 | | | Green | 53 | OSA021 |
| | | Red | 102 | OSA005 | | | Red | 70 | OSA022 |
| | | | | | | | White | 95 | OSA023 |
| | • ⅜" threaded<br>• Upside down<br>• Meteor 44<br>• Green Spinner | Green | 75 | OSA032 | | • Conical<br>• Upside down<br>• drip valve<br>• Pipe 35 cm with fitting<br>• Stabilizer<br>• Green Spinner | Green | 75 | OSA016 |
| | | Yellow | 205 | OSA036 | | | Red | 102 | OSA017 |
| | | Orange | 298 | OSA038 | | | | | |

## SI 22 MINI SPRINKLER

Mini sprinklers in full circle with 2 nozzles - Made with plastic material and metal parts in galvanized steel. Colored nozzles (for easy identification) with bayonet.

| Code | Description |
|---|---|
| OSR960 | Sprinkler SI 22 full circle with 2 nozzles |

**Features:** male thread ½ "- trajectory angle: 24° - range 10 to 12.5 meters - 60 mesh filtration recommended - working pressure 2.5 to 4.0 bar.

**MINI-SPRINKLERS SI 22 NOT SELF COMPENSATING PERFORMANCE**

| Sixth mt | Nozzle mm | Nozzle colour | Inlet Pressure atm | Flow l/h | Rainfall mm/h | Range mt | | PEbd PFA4 40 | | Layflat 1"½ | | Layflat 2" | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Gap flow rate between first and last sprinkler on the row | | | | | |
| | | | | | | | | 10% | 15% | 10% | 15% | 10% | 15% |
| 10x10 | 2,5 x 1,8 | Violet | 2,5 | 582 | 5,8 | 10,0 | n° max sprinklers on the row | 11 | 13 | 14 | 17 | 23 | 26 |
| | | | 3 -3,5 | 630 | 6,3 | 10,0 | | 11 | 13 | 15 | 17 | 23 | 27 |
| | | | 4,0 | 720 | 7,2 | 10,5 | | 12 | 13 | 15 | 17 | 23 | 27 |
| | 3 x 1,8 | Red | 2,5 - 3 | 762 | 7,6 | 10,5 | | 9 | 10 | 12 | 14 | 19 | 22 |
| | | | 3,5 | 900 | 9,0 | 11,0 | | 9 | 11 | 12 | 14 | 19 | 22 |
| | | | 4,0 | 972 | 9,7 | 11,3 | | 9 | 10 | 12 | 14 | 19 | 22 |
| | 3,5 x 2,5 | Blue | 2,5 | 1.026 | 10,3 | 11,5 | | 7 | 8 | 10 | 11 | 15 | 18 |
| | | | 3,0 | 1.158 | 11,6 | 11,8 | | 7 | 8 | 9 | 11 | 15 | 18 |
| | | | 3,5 - 4 | 1.242 | 12,4 | 12,0 | | 7 | 8 | 10 | 11 | 15 | 18 |
| | 4 x 2,5 | Black | 2,5 - 3 - 3,5 | 1.260 | 12,6 | 11,5 | | 6 | 7 | 8 | 10 | 13 | 16 |
| | | | 4,0 | 1.578 | 15,8 | 12,5 | | 6 | 7 | 8 | 10 | 14 | 16 |
| 11x11 | 2,5 x 1,8 | Violet | 2,5 | 582 | 5,3 | 10,0 | | 10 | 11 | 13 | 15 | 20 | 24 |
| | | | 3 - 3,5 | 630 | 5,7 | 10,0 | | 10 | 12 | 13 | 15 | 21 | 24 |
| | | | 4,0 | 720 | 6,5 | 10,5 | | 10 | 12 | 13 | 16 | 21 | 24 |
| | 3 x 1,8 | Red | 2,5 | 762 | 6,9 | 10,5 | | 8 | 9 | 11 | 13 | 17 | 20 |
| | | | 3,0 | 840 | 7,6 | 10,8 | | 8 | 11 | 11 | 13 | 17 | 20 |
| | | | 3,5 | 900 | 8,2 | 11,0 | | 8 | 10 | 11 | 13 | 17 | 20 |
| | | | 4,0 | 972 | 8,8 | 11,3 | | 8 | 11 | 11 | 13 | 17 | 20 |
| | 3,5 x 2,5 | Blue | 2,5 -3 | 1.026 | 9,3 | 11,5 | | 6 | 7 | 9 | 10 | 14 | 16 |
| | | | 3,5 - 4 | 1.242 | 11,3 | 12,0 | | 6 | 8 | 9 | 10 | 14 | 16 |
| | 4 x 2,5 | Black | 2,5 - 3 | 1.260 | 11,5 | 11,5 | | 6 | 7 | 7 | 9 | 12 | 14 |
| | | | 3,5 - 4 | 1.482 | 13,5 | 12,5 | | 6 | 7 | 8 | 9 | 12 | 14 |
| 12x12 | 2,5 x 1,8 | Violet | 2,5 | 582 | 5,8 | 10,0 | | 9 | 10 | 11 | 14 | 19 | 22 |
| | | | 3 - 3,5 - 4 | 630 | 6,3 | 10,0 | | 9 | 11 | 12 | 14 | 19 | 22 |
| | 3 x 1,8 | Red | 2,5 | 762 | 7,6 | 10,5 | | 7 | 9 | 10 | 11 | 16 | 18 |
| | | | 3,0 | 840 | 8,4 | 10,8 | | 7 | 10 | 10 | 11 | 16 | 18 |
| | | | 3,5 | 900 | 9,0 | 11,0 | | 7 | 9 | 10 | 12 | 16 | 18 |
| | | | 4,0 | 972 | 9,7 | 11,3 | | 7 | 10 | 10 | 11 | 16 | 18 |
| | 3,5 x 2,5 | Blue | 2,5 | 1.026 | 10,3 | 11,5 | | 6 | 7 | 8 | 9 | 13 | 15 |
| | | | 3,0 | 1.158 | 11,6 | 11,8 | | 6 | 7 | 8 | 9 | 12 | 14 |
| | | | 3,5 - 4 | 1.242 | 12,4 | 12,0 | | 6 | 7 | 8 | 9 | 13 | 15 |
| | 4 x 2,5 | Black | 2,5 - 3 - 3,5 - 4 | 1.260 | 12,6 | 11,5 | | 5 | 6 | 7 | 8 | 11 | 13 |

## SPRINKLER RI-6 IN PLASTIC PART CIRCLE Ø ½" M

Part circle sprinkler working angle 25° adjustable with 1 nozzle. It is built in plastic material.
Available in 2 different coloured nozzles.

| Code | Description |
|---|---|
| OSR953 | Sprinkler with 1 nozzle |

### TECHINCAL DATA:

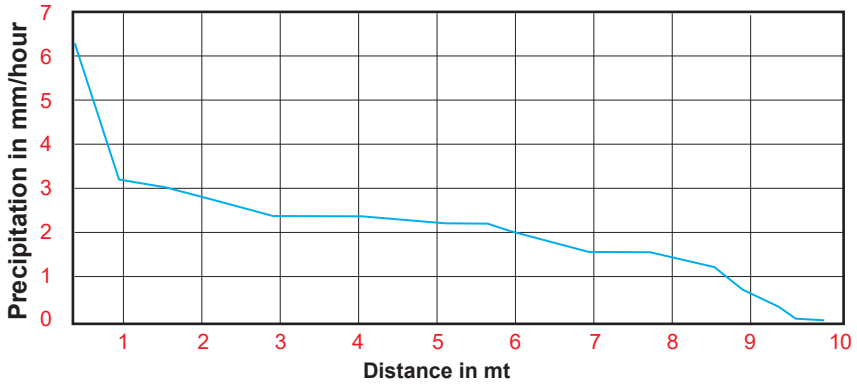
- Male connection ½"
- Trajectory 25° adjustable
- Working pressure 1-3 bar

**NOZZLES PERFORMANCE**

| Code | Press. Kg/cm² | Ø Ug. mm 3,2 Yellow Radius mt | Q l/m | Ø Ug. mm 4,2• Light blue Radius mt | Q l/m |
|---|---|---|---|---|---|
| OSR953 | 2,5 | 10,5 | 9,6 | 11,5 | 15,0 |
| | 3,0 | 11,0 | 10,5 | 12,0 | 16,5 |

• standard

**Performance graph with ø 3.2 mm nozzle and 2 bar pressure**




## SUPER 10

### APPLICATIONS

Overhead irrigation for extra-range.

### MAIN FEATURES

• Compact sturdy closed and protected ball engine;
• Bayonet nozzle for easy service;
• Flow regulator - F.R. (optional);
• High water distribution.

Ball-driven extra-range sprinkler on IrriStand 52. Spacing up to 12m.

**DESCRIPTION SUPER 10 COMPENSATING BETWEEN 3.0 - 5.0**

| Color nozzle | Code | Flow rate l/h | ø wet mt | mt 8 x 8 | 9 x 9 | 9 x 10 | 10 x 10 |
|---|---|---|---|---|---|---|---|
| | | | | Precipitation mm/h | | | |
| blue | OSR909 | 360 | 17 | 5,2 | 4,5 | 3,7 | 3,3 |
| yellow | OSR910 | 450 | 20 | 7,0 | 5,6 | 5,0 | 4,5 |
| green | OSR912 | 550 | 20 | 8,6 | 6,8 | 6,1 | 5,5 |
| red | OSR911 | 670 | 21 | 10,5 | 8,3 | 7,4 | 6,7 |

## RAIN BIRD SPRINKLERS LF SERIES

Full circle low-flow sprinkler

**APPLICATIONS**: the Rain Bird® LF Series Sprinkler is built rugged to withstand the harsh conditions in turf and agricultural applications (nurseries, sod farm…). It has been designed to combine the advantages of an impact sprinkler with stream height flexibility, delivering precise, uniform and unrivalled water distribution.

**FEATURES**: • High Distribution Uniformity - Weighted drive disk provides an increased dwell time between stream interruptions to achieve the maximum distance of throw - During impact, the Precision Jet (PJ) spoon guides the water stream gently away from the riser • Most Robust Sprinkler in its Class - Patented Ceramic Radial Bearing (CRB) is longer lasting than conventional counterparts - Drive disk made of engineered thermoplastic Shields and protects brake mechanism from wind-blown debris and freezing - Springs and pin composed of high-grade stainless steel - Ultraviolet (UV) stabilizer protects the sprinkler from the sun • Easy to Use - No special tools required - Color coded nozzles and deflectors allow easy identification - Weed Guard blocks weeds from growing into the sprinkler and stopping the rotation

**SPECIFICATIONS**: ½" (13 mm) BSP male pipe thread • Nozzle Sizes: LF 1200: 270 l/h to 480 l/h (in mm: 1,98 / 2,18 / 2,39 / 2,59/ 2,76) - LF 2400: 450 l/h to 910 l/h (in mm: 2,76/ 2,97/ 3,18/ 3,38/ 3,63) • Deflector trajectory outlets available: LF 1200: 6°/ 10°/ 12°/ 16°/ 17°/ 21° - LF 2400: 10°/ 13°/ 15°/ 22° • Common Spacings Range: 8m x 8m to 15m x 15m

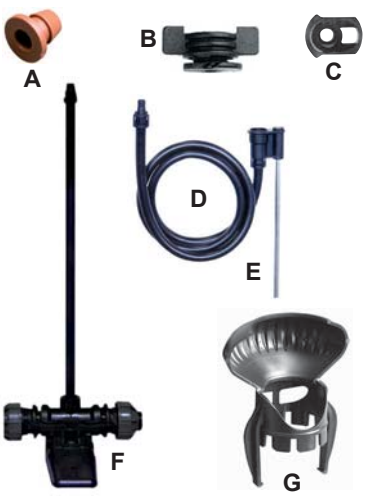
**PERFORMANCE (LF 1200)**

| Deflector 6° (Dark purple) | | | | | | | Deflector 12° (Dark green) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nozzle | 44 drill | | 3/32" | | 38 drill | | 44 drill | | 3/32" | | 38 drill | |
| Code | AIR515 | | AIR516 | | AIR517 | | AIR519 | | AIR520 | | AIR521 | |
| Bar | Mt | l/h | Mt | l/h | Mt | l/h | Mt | l/h | Mt | l/h | Mt | l/h |
| 2,1 | 7,32 | 266 | 7,92 | 316 | 8,23 | 370 | 8,23 | 266 | 8,84 | 316 | 9,14 | 370 |
| 2,4 | 7,62 | 286 | 8,23 | 341 | 8,53 | 402 | 8,53 | 286 | 9,14 | 341 | 9,45 | 402 |
| 2,8 | 7,92 | 307 | 8,53 | 366 | 8,84 | 429 | 8,84 | 307 | 9,45 | 366 | 9,75 | 429 |
| 3,1 | 7,92 | 325 | 8,53 | 388 | 8,84 | 454 | 8,84 | 325 | 9,45 | 388 | 9,75 | 454 |
| **Deflector 17° (Light blue)** | | | | | | | **Deflector 21° (Olive green)** | | | | | |
| Nozzle | 44 drill | | 3/32" | | 38 drill | | 44 drill | | 3/32" | | 38 drill | |
| Code | AIR523 | | AIR524 | | AIR525 | | AIR527 | | AIR528 | | AIR529 | |
| Bar | Mt | l/h | Mt | l/h | Mt | l/h | Mt | l/h | Mt | l/h | Mt | l/h |
| 2,1 | 9,45 | 266 | 10,06 | 316 | 10,36 | 370 | 10,36 | 266 | 10,36 | 316 | 10,60 | 370 |
| 2,4 | 10,06 | 286 | 10,36 | 341 | 10,67 | 402 | 10,36 | 286 | 10,66 | 341 | 11,00 | 402 |
| 2,8 | 10,06 | 307 | 10,67 | 366 | 10,97 | 429 | 10,36 | 307 | 10,66 | 366 | 11,00 | 429 |
| 3,1 | 10,06 | 325 | 10,67 | 388 | 10,97 | 454 | 10,66 | 325 | 10,66 | 388 | 11,00 | 454 |

**PERFORMANCE (LF 2400)**

| Deflector 10° (White) | | | | | | | Deflector 15° (Orange) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nozzle | 30 drill | | 8/64" | | 9/64" | | 2,59 mm | | 8/64" | | 9/64" | |
| Code | AIR531 | | AIR532 | | AIR533 | | AIR535 | | AIR536 | | AIR537 | |
| Bar | Mt | l/h | Mt | l/h | Mt | l/h | Mt | l/h | Mt | l/h | Mt | l/h |
| 2,1 | 9,14 | 493 | 9,75 | 568 | 10,36 | 742 | 10,06 | 493 | 10,36 | 568 | 10,97 | 742 |
| 2,4 | 9,75 | 534 | 10,06 | 613 | 10,67 | 802 | 10,36 | 534 | 10,67 | 613 | 11,28 | 802 |
| 2,8 | 10,06 | 575 | 10,36 | 656 | 10,97 | 859 | 10,97 | 575 | 11,28 | 656 | 11,89 | 859 |
| 3,1 | 10,36 | 606 | 10,67 | 697 | 10,97 | 913 | 10,97 | 606 | 11,28 | 697 | 11,89 | 913 |
| **Deflector 22° (Dark green)** | | | | | | | | | | | | |
| Nozzle | 7/64" | | 30 drill | | 8/64" | | 29 drill | | 9/64" | | | |
| Code | AIR539 | | AIR540 | | AIR541 | | AIR542 | | AIR543 | | | |
| Bar | Mt | l/h | Mt | l/h | Mt | l/h | Mt | l/h | Mt | l/h | | |
| 2,1 | 11,28 | 420 | 11,58 | 493 | 11,89 | 568 | 12,50 | 638 | 12,19 | 742 | | |
| 2,4 | 11,28 | 454 | 11,89 | 534 | 12,19 | 613 | 12,80 | 688 | 13,11 | 802 | | |
| 2,8 | 11,58 | 488 | 12,19 | 575 | 12,50 | 656 | 12,80 | 738 | 13,41 | 859 | | |
| 3,1 | 11,89 | 518 | 12,50 | 606 | 12,50 | 697 | 13,11 | 784 | 13,72 | 913 | | |

## MICRO E MINI SPRINKLERS ACCESSORIES




| Codice | Fig. | Tipo | Caratteristiche |
|---|---|---|---|
| RMP950 | A | Insert | female 9/13-7/10 for starter pipe PE |
| RLF001 | B | Conical insert for stand | da Lay-Flat x tubo 10mm |
| OSR251 | C | Attacco rapido | FNF |
| RSTD022 | D | Stand 52 without rod• | Joint irr/pipe compensating max 540 l/h |
| RSTD025 | | | Joint irr/pipe non compensating |
| OAT250 | E | Iron rod | ø 8 mm - 120 cm lenght |
| OCL015 | F | Quickstand•• | Sprinkler support quick insert |
| OMKR057 | G | Protection | Protection road 180° |

• Composed by support - 2 rings - Cm 120 pipe PE mm 10/14 - quick insert for pipe PE or coupling starter from mobile pipe

•• Composed by support - 2 quick comprenssion insert for pipe PE ø 50 - rod in PVC

**Application of Quickstand**

## ► MICROIRRIGATION SYSTEM IN PE WITH QUICK CONNECTION

**Fitting**

| | Description | | Ø mm | Code | Pack |
|---|---|---|---|---|---|
| | Hidrant latch type thread ¾" F | | 75 | RRT076 | NEW |
| | | | 90 | RRT077 | |
| | | | 110 | RRT078 | |
| | PVC riser | cm 33 | ¾" | RRT123 | |
| | | cm 100 | | RRT126 | |
| | Tee clamp type | | 75x75 | RRT032 | |
| | | | 90x75 | RRT033 | |
| | | | 90x90 | RRT034 | |
| | | | 110x75 | RRT035 | |
| | | | 110x90 | RRT036 | |
| | | | 110x110 | RRT037 | |
| | Elbow clamp type | | 75 | RRT068 | |
| | | | 90 | RRT069 | |
| | | | 110 | RRT070 | |
| | Male head lactch type | | 75 | RRT176 | |
| | | | 90 | RRT177 | |
| | | | 110 | RRT178 | |
| | Female head lactch type | | 75 | RRT086 | |
| | | | 90 | RRT087 | |
| | | | 110 | RRT088 | |
| | End cap lactch type | | 75 | RRT116 | 1 |
| | | | 90 | RRT117 | |
| | | | 110 | RRT118 | |
| | Reducer lactch type | | 75x50 | RRT054 | |
| | | | 75x63 | RRT055 | |
| | | | 90x75 | RRT056 | |
| | | | 110x75 | RRT057 | |
| | | | 110x90 | RRT058 | |
| | | | 125x90 | RRT059 | |
| | Cross clamp type | | 75x50 | RRT004 | |
| | | | 75x63 | RRT005 | |
| | | | 75x75 | RRT006 | |
| | | | 90x75 | RRT007 | |
| | | | 90x90 | RRT008 | |
| | | | 110x75 | RRT009 | |
| | | | 110x90 | RRT010 | |
| | | | 110x110 | RRT011 | |
| | Pump connector lactch type | | 75 | RRT108 | |
| | | | 90 | RRT109 | |
| | Adapter F/F | | 1"x¾" | RRT127 | |

**Tubo**

| | Description | Ø | Code | Pack |
|---|---|---|---|---|
| | Pipe Pe PFA6 6 mt stick with quick joint | 50 | RRT098 | 1 |
| | | 63 | RRT099 | |
| | | 75 | RRT100 | |
| | | 90 | RRT101 | |
| | | 110 | RRT102 | |
| | | 140 | RRT104 | |

## ► PUMPING FILTRATION FERTIGATION INTEGRATED SYSTEM

Integrated pumping, filtration and fertigation system, high flow rate used in different contests, they are very easy to move. Regulating valve on board, on request, for irrigation programmers.

NEW

**Pumping/filtration/fertigation with cardan pump**

| Description | Ø filter | Code | |
|---|---|---|---|
| • Max flowrate 540 rpm Pto 240 mc/h<br>• Max pressure 6 bar<br>• Frame with 3 point connection<br>• Fitting<br>• Dosing pump fertilizer 12VCC 300 l/h<br>• Reducer/sustaining valve pressure DN150<br>• Rovatti pump T4 125E | 6" | GMP012 | |
| | 8" | GMP011 | |
| | 10" | GMP010 | |
| Version with lifting winch<br>• Frame<br>• Dosing pump fertilizer 12VCC<br>• Reducer/sustaining valve pressure DN150<br>• Fitting<br>• Winch<br>• Rovatti pump T4 125E | 6" | GMP033 | |
| | 8" | GMP032 | |
| | 10" | GMP031 | |
| Version with fertilizers tanks installed<br>• Frame<br>• Fitting<br>• Winch<br>• Support x 2 fertilizers<br>• 2 fertilizers 400 lt<br>• Reducer/sustaining valve pressure DN150<br>• Rovatti pump T4 125E | 6" | GMP042 | |
| | 8" | GMP041 | |
| | 10" | GMP040 | |

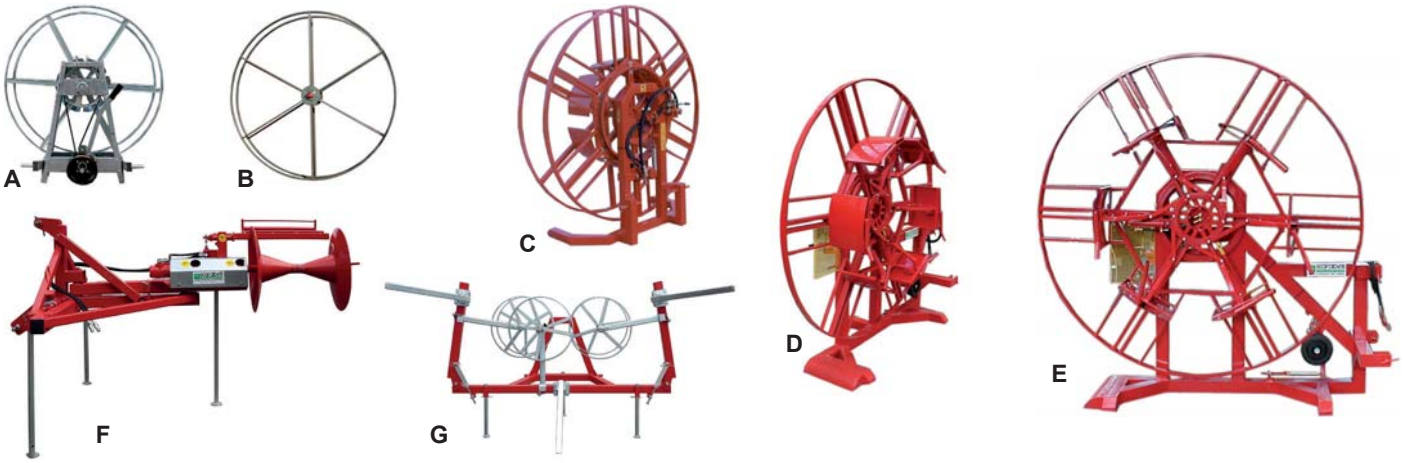
| Motopump with filtration and fertigation | | | |
|---|---|---|---|
| Description | Ø filter | Code | |
| • Max flow rate 270 mc/h<br>• Max pressure 6 bar<br>• Dosing fertilizer pump 12 VCC 300 l/h<br>• reducer/sustaining valve pressure DN150<br>• Motopump with engine AIFo (low working cost and excellent engline) | 6" | GMP022 | |
| | 8" | GMP021 | |
| | 10" | GMP020 | |
| **Special version with motopump, filtration and fertigation** | | | |
| Version with Agronic 2500 and fertilizer tank<br>• 1 fertilizer 400 lt<br>• reducer/sustaining valve pressure DN150 | On demand | | |
| Version with fertigation kit installed<br>• Details kit fertigation page 188 | | | |

| Accessories | |
|---|---|
| Description | Code |
| Winch | AAC190 |
| Single fertilizer tank | AFR020 |
| Installation Agronic 2509 with 4 solenoid connected | FVR460+AGRONIC |
| Solenoids added (up to 8) | FVR870 |
| Suction see on page pagina 135 | |

## ► MACHINES TO COIL AND LAY PE PIPE AND DRIPLINES

### COIL AND LAY DRIPLINE AND PIPE IN PE

| Code | Model | Pic. | Ø pipe PE mm | Dimensions mm | | | Weight Kg | Note |
|---|---|---|---|---|---|---|---|---|
| | | | | Leng. | Width. | Height | | |
| AAV001 | AVV. PICH. UP. T 400 | A | max 25 | 1150 | 650 | 1250 | 60 | Machine suspended on three points of the tractor drive shaft drive. Allows the recovery of laterals |
| AAV003 | AVV. ID. T 25/40 | C | 32 ÷ 50 | 2400 | 750 | 2200 | 200 | |
| AAV007 | AVV. ID. 50/75 | D | 40 ÷ 75 | 2700 | 800 | 2680 | 350 | The take-up spool has a variable max excursion of 300 mm (1.470 ÷ 1.770 mm) |
| AAV008 | AVV. ID. 63/110 | E | 75 ÷ 110 | 3250 | 1250 | 3250 | 500 | The take-up spool has a variable max excursion of 480 mm (2.020 ÷ 2.500 mm) |
| AAVZ100 | Circle of containment | B | | | | | | Galvanized Ø 1.860 mm for Layflat on T. 25/40 |
| AAV160 | | F | Hose reel with front or rear fixing. Fix frame, engine with flexible coupling and valve. It is perfect to wrap dripline not under earth. | | | | | |
| AAV210 | | G | Unroll dripline with three adjustable row, frame with metal close to be transported on the street. Landfill max 5 cm. | | | | | |

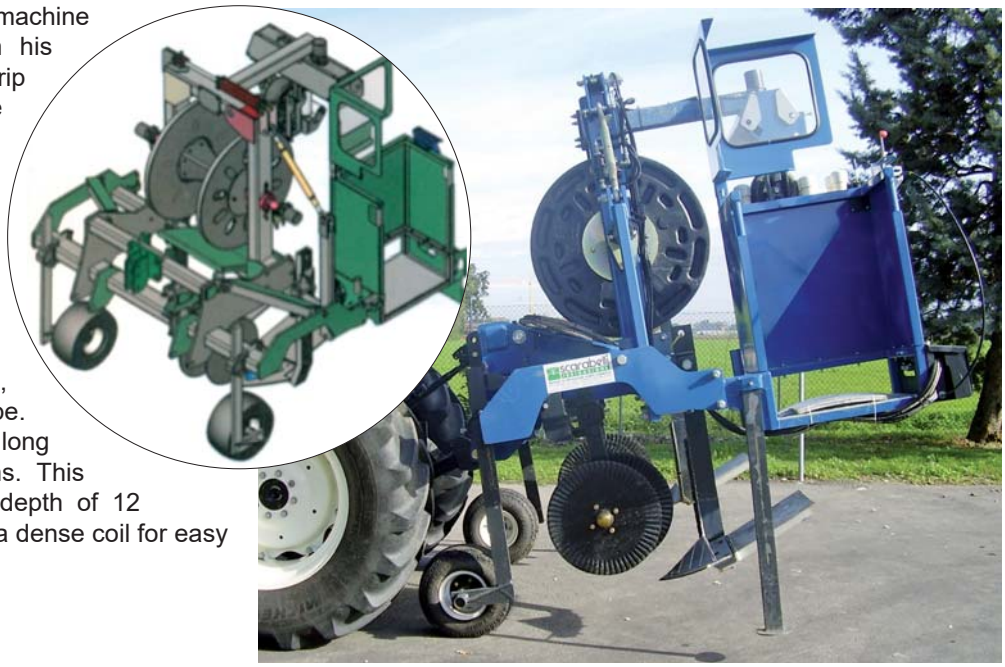



### T-R-L TO LAY DRIPLINE IN DEPTH

**The new T-R-L machine** (tape roller lay) is designed to meet the needs of growers requiring a more robust tool for injecting a wide variety of sizes and styles of drip tape.

The hybrid tool is faster, stronger and safer to use than anything built in the past. The length can be settled to lay dripline till 60 cm of depth. The pivoting access door allows the operators to inspect tool for internal wear or contamination making the replacing or the cleaning activities easy and fast.

## T-R-U TO COIL UP DRIPLINE



**The new T-R-U (tape roller up)** machine is the most compact product in his category. Designed for removal of drip tape for disposal, this new machine combines the tape lifting abilities with the unparalleled drip tape compaction. The result is a tape pulling machine that is safer, faster and narrower than anything we have produced until now. The compact design is perfect for smaller tractors with 100 horse power, or even less, depending on the depth and soil type. The heavy-duty design provides long life under adverse field conditions. This machine will dig to a maximum depth of 12 inches and compact drip tape into a dense coil for easy recycling or disposal.

### FEATURES

- Narrow and compact design.
- Operator station with safe and lexan viewing area.
- Auto Dump with deflection plate.
- Variable speed, controlled by operator.
- Easy side access operators station.
- Additional row spacing available upon request.
- Reduces manual field labor.
- Eliminates tape trash in the field.
- Can be configured to retrieve plastic mulch.

### ACCESSORIES CAN INCLUDE

- Double, adjustable width, spring breakway, 20” heavy duty coulter wheels.
- Heavy duty 2x4 undercutters/lifters.
- 15” wide lister blades.
- Extra satety package available.

## SUBIRRIGATION BURYING FOR DRIPLINE

NEW

| Description | Code |
|---|---|
| Burying two rows - Burying max depth cm 40 | AAV209 |

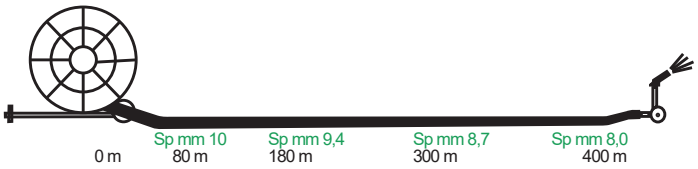
**Technical data**:

- 2 rows
- For rolls ø16 or ø20 dripline as PC2
- anchors mounted on movable and adjustable parallelogram
- adjustable spring
- double frame 2,00 mt width
- 2 adjustable wheels
- 2 adjustable reels
- Anchor and burying plow hardox
- Working depth from 0 until 40 cm

DRIPLINE SELF COMPENSATING PC2 SEE ON PAGE 127

## ► SELF MOVING AUTOMATIC MACHINE

All moving automatic machine with polyethylene pipe in a differential thickness.



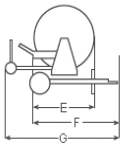

## IDROMOTOR S 1 - S 2 - S 3 - S 4 - S 5

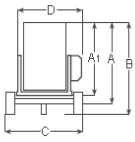
**Travellers with hot-galvanised lower and upper frame and revolving turret**

Standard
equipment:
Telescopic mechanical feet
• P.T.O. to the gearbox • Choke-flow turbine • Trolley for sprinkler with adjustable wheel track • Pressure gauge in glycerine bath
• Handwheel for manual winding • Speed equalizer • Tachometer • 3-speed gearbox • Drawbar mechanical support • Safety guards • Side feed • Flanged turbine connected to the gearbox • Gun • Connection hose.
In compliance with 89/392/EEC.

| Model | Code | ø pipe | Lenght | Raingum |
|---|---|---|---|---|
| S 1 | ASR030 | 63 | 250 | TWIN 101 |
| S 2 | ASR031 | 75 | 300 | TWIN 101 |
| | ASR032 | 82 | 320 | TWIN 101 |
| S 3 | ASR040 | 82 | 400 | TWIN 101 |
| | ASR041 | 90 | 300 | TWIN 140 |
| | ASR042 | 90 | 350 | TWIN 140 |
| | ASR043 | 100 | 250 | TWIN 140 |
| S 4 | ASR044 | 90 | 350 | TWIN 140 |
| | ASR045 | 90 | 400 | TWIN 140 |
| | ASR046 | 100 | 350 | TWIN 140 |
| | ASR047 | 100 | 400 | TWIN 140 |
| | ASR048 | 110 | 300 | TWIN 160 |
| S 5 | ASR049 | 100 | 450 | TWIN 140 |
| | ASR050 | 100 | 500 | TWIN 140 |
| | ASR051 | 110 | 400 | TWIN 160 |
| | ASR052 | 110 | 450 | TWIN 160 |
| | ASR053 | 110 | 500 | TWIN 160 |
| | ASR054 | 125 | 380 | TWIN 202 |
| | ASR055 | 125 | 400 | TWIN 202 |
| | ASR056 | 140 | 300 | TWIN 202 |

### MISURE DI INGOMBRO E PESO IDROMOTOR S 1 - S 2 - S 3 - S 4 - S 5




| Structure | A | A1 | B | C | D | E | F | G | Kg |
|---|---|---|---|---|---|---|---|---|---|
| S 1 | 1.800 | | 2.060 | 1.560 | 1.500 | 1.800 | 2.650 | 4.200 | 1.000 |
| S 2 | 2.100 | | 2.400 | 1.860 | 1.670 | 1.900 | 2.900 | 4.400 | 1.500 ÷ 1.600 |
| S 3 | 2.350 | | 2.600 | 2.120 | 1.870 | 2.150 | 3.000 | 4.600 | 2.000 ÷ 2.100 |
| S 4 | 2.800 | 2.650 | 3.050 | 2.340 | 1.900 | 2.500 | 3.200 | 5.000 | 2.400 ÷ 2.700 |
| S 5 | 3.100 | 2.900 | 3.350 | 2.350 | 2.150 | 2.700 | 3.650 | 5.800 | 3.150 ÷ 4.000 |

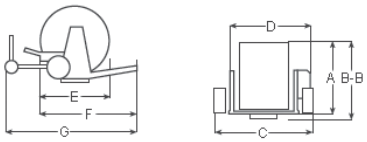
# IDROMOTOR Si 0 - Si 1 - Si 2 - Si 3 - Si 4

**Rotating traveller with ground positioning.**
**Hot-galvanised (Si 0 - Si 1) or painted (Si 2 - Si 3 - Si 4) load-bearing structure**

Standard equipment:
Hydraulic lifting of the trolley, wheels and shaft (staker legs lifting on Si 4) • Control unit to set the rewinding speed on Si 4 • Hoses with quick clutches to be connected to the tractor in order to drive the hydraulic system
• On Model Si 4 the drum is driven by double toothed crown
• 4 twin-axle wheels machine chassis on Model Si 4 • Turret hydraulic rotation device (Si 3 - Si 4) • 6-speed gearbox • P.T.O. to the gearbox • Flanged turbine connected to the gearbox
• Choke-flow turbine • Trolley for sprinkler with adjustable wheel track • Pressure gauge in glycerine bath • Handwheel for ma-nual winding • Speed equalizer • Tachometer
• Compressor for emptying operations (Si 3 - Si 4) • Gun • Connection hose
In compliance with 89/392/EEC.

| Model | Code | ø pipe | Lenght | Raingum |
|---|---|---|---|---|
| Si 0 | ASR060 | 82 | 400 | TWIN 101 |
| | ASR061 | 90 | 350 | TWIN 140 |
| | ASR062 | 90 | 400 | TWIN 140 |
| | ASR063 | 100 | 350 | TWIN 140 |
| | ASR064 | 100 | 400 | TWIN 140 |
| | ASR065 | 110 | 300 | TWIN 160 |
| Si 1 | ASR066 | 100 | 450 | TWIN 140 |
| | ASR067 | 100 | 500 | TWIN 140 |
| | ASR068 | 110 | 400 | TWIN 160 |
| | ASR069 | 110 | 450 | TWIN 160 |
| | ASR070 | 110 | 500 | TWIN 160 |
| | ASR071 | 125 | 380 | TWIN 202 |
| | ASR072 | 125 | 400 | TWIN 202 |
| Si 2 | ASR074 | 110 | 600 | TWIN 160 |
| | ASR075 | 125 | 450 | TWIN 202 |
| | ASR076 | 125 | 500 | TWIN 202 |
| | ASR077 | 140 | 400 | TWIN 202 |
| Si 3 | ASR078 | 125 | 550 | TWIN 202 |
| | ASR079 | 140 | 450 | TWIN 202 |
| Si 4 | ASR081 | 125 | 650 | TWIN 202 |
| | ASR082 | 140 | 500 | TWIN 202 |
| | ASR083 | 140 | 550 | TWIN 202 |

## MISURE DI INGOMBRO E PESO IDROMOTOR Si 0 - Si 1 - Si 2 - Si 3 - Si 4



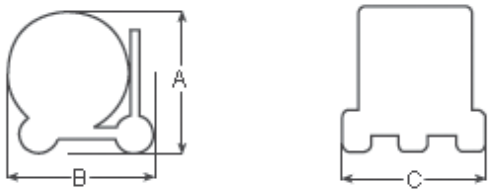

| Structure | A | B | B1 | C | D | E | F | G | Kg |
|---|---|---|---|---|---|---|---|---|---|
| Si 0 | 2.600 | 3.000 | 2.750 | 2.220 | 1.900 | 2.500 | 3.200 | 4.800 | 2.700 - 3.000 |
| Si 1 | 2.850 | 3.300 | 3.000 | 2.430 | 2.150 | 2.700 | 3.650 | 5.000 | 3.350 - 4.200 |
| Si 2 | 3.200 | 3.700 | 3.500 | 2.640 | 2.410 | 3.100 | 4.100 | 5.100 | 5.000 - 5.500 |
| Si 3 | 3.650 | 4.200 | 3.950 | 2.740 | 2.410 | 3.500 | 4.500 | 5.400 | 7.450 - 7.550 |
| Si 4 | 3.700 | 4.250 | 4.000 | 2.900 | 2.410 | 3.600 | 4.800 | 5.700 | 9.300 - 9.800 |

## MINI IDROMOTOR
## 40/125 - 50/150 - 63/100

Full automatic pipe with rewinding quality while irrigating thanks to a reduced flow, hydraulic turbine and maintenance-free coaxial gearbox. Minimum pressure required 3,5 bar, maximum 8 bar (checked by the provided manometer). Rewinding speed fully adjustable. Automatic stop at the end of the operation. Compact dimensions, optimum balancing weight on wheels. Adjustable part circle sprinkler with spare nozzles. Economic and maintenance-free. Endless screw fit hoseguide for perfect pipe rewinding. Sprinkler mounted on hot dip galvanized trolley with variable wheel track. Hot dip galvanized frame (mod. 40/125 not included). Practical and easy-to-use: no experience is required for the installation and the usage. Detailed instruction manual. Connection hose. In compliance with 89/392/EEC

| Code | ø pipe | Length | Sprinkler |
|---|---|---|---|
| OIR200 | 40 | 125 | K1 |
| OIR201 | 50 | 150 | AMBO/63 |
| OIR202 | 63 | 100 | SENIOR |

| Structure | A | B | C | Kg |
|---|---|---|---|---|
| Mini 40/125 | 1.250 | 1.350 | 1.100 | 220 |
| Mini 50/150 | 1.500 | 1.800 | 1.300 | 450 |
| Mini 63/100 | 1.500 | 1.800 | 1.300 | 450 |



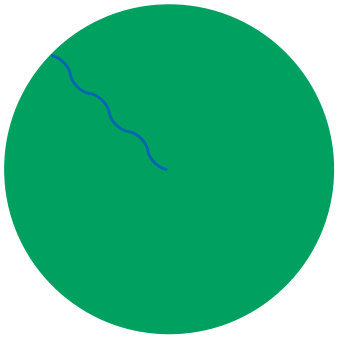

## PIVOT

| | Description | Code |
|---|---|---|
| PIVOT | Pivot low pressure 25 m (width wing) - 32 (strip irrigated) swivel, galvanized (cart excluded) - Standard brass Nozzles ø 4 | AAP010 |
| | Pivot low pressure 32 m (width wing) - 40 (strip irrigated) swivel, galvanized (cart excluded) - Standard brass Nozzles ø 5 | AAP011 |
| | Pivot low pressure 42 m (width wing) - 50 (strip irrigated) swivel, galvanized (cart excluded) - Standard brass Nozzles ø 6 | AAP012 |
| | Other models on request | |
| TROLLEY PIVOT | Trolley pivot galvanized and variable track with two fixed wheels and a swivel | AAP100 |
| | Trolley with 3 wheels for wings 25-32 and 32-40 | AAP101 |
| | Trolley Pivot hot galvanized height adjustable through the winch 1 to 2.7 m. It has two fixed wheels and two castors. It can be used for Pivot 42-50. Pivot equipped in this way, it will no longer be self-leveling rotating it | AAP102 |
| OPTIONAL ACCESSORIES | Nozzle brass | AAP130 |
| | N. 2 filters ø 2” with cartridge inox complete application to the central body | AAP140 |

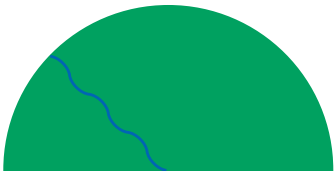
## ▶ CENTRAL PIVOT

# CENTRAL PIVOT

The pyramidal structure built up with galvanized-steel angular profiles and the bolt anchoring to a square concrete platform give the pivot a great sturdiness able to support the turning movements of the machine.
The pivot is water-fed through an up-going pipe and an elbow, both made of galvanized steel of 8 /5/8" (219 mm) diameter. It contains a 13 wires external collector ring, with an access ladder. The standard height of this machine and the rest of the system is 3.30 m, although it can reach up to 4,10 m on the extra high model.



Center Pivot



Sectorial Pivot

# LATERAL MOVING SYSTEM with hose drag

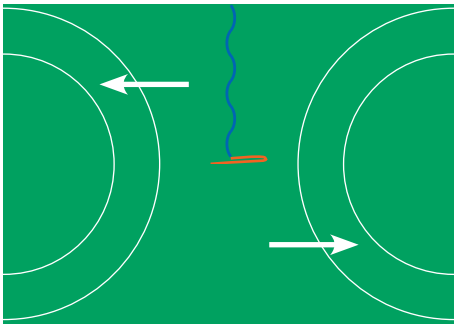
### STANDARD LATERAL

Due to their lateral movement, standard front systems are suitable for the irrigation of rectangular or square extensions. The cart is mounted on 2 or 4 driving wheels, and it is powered by a hose connected to one or several hydrants, according to the dimensions of the plot and the flow to be brought. The alignment system is performed by means of a furrow or a cable with touch devices.

### REVOLVING LATERAL

In addition to the same movements of the standard lateral one, this system has the advantage of being able to cover two times the irrigation wideness compared the former one. The cart of the Revolving Lateral System is equipped with 2 or 4+2 driving wheels which allow the machine to pivot when anchored to the foundation base.

Lateral Standard



Revolving lateral

## LATERAL MOVING SYSTEM ditch feed

Ditch feed lateral system feeds directly from a flat channel. On a 4-wheel cart, it is assembled an engine driven pump group that sucks in the flow required. There are two versions: electrical or diesel. In the first case, you need a surface electricity cable that provides the power requested for the functioning; and regarding the diesel case you need a generating set to supply power to the pump and to the whole system.

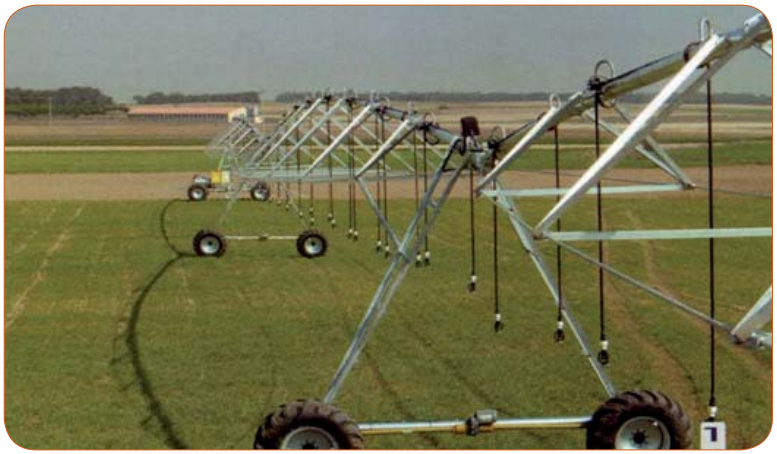
## HIPPODROME SYSTEM

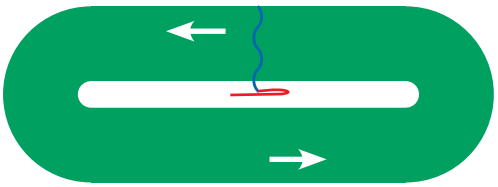
**STANDARD**

The system has been designed to irrigate square, rectangular and trapezoid shape plots, making the turn possible by pivoting one or several points. The irrigate when necessary, without the need to anchor the central cart.
The pivot structure is assembled on the 4-wheel cart and a hose feed with water to the up going pipe and the elbow, both made of galvanized steel of 8 5/8” (219 mm) diameter. It contains a 13 wires external collector ring with an access ladder.

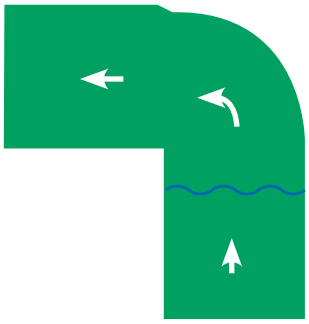
**MULTIDIRECTIONAL**

It allows irrigation also over L and U shape plots as the cart wheels can be rotated in order to allow self-propelled movement in different directions.





**Standard**



**Multidirectional**

# PUMPS AND ACCESSORIES

## ► SUBMERSIBLE PUMPS WITH (SQE) OR WITHOUT(SQ) INVERTER

### USEFUL PROPERTIES

SQ and SQE pumps are suitable for small domestic irrigation systems water supply both intermittent and continuous operation.
SQ and SQE pumps features:

- built-in check valve
- axial thrust protection
- soft start device
- overtemperature, overload, overvoltage and undervoltage protection.

### PERFORMANCE LIMITS

SQ and SQE pumps are created to pump liquids that must be light, clean, not aggressive, not explosive, temperature under 30/40°, without any solid particles, or fibre or with 50 g/m3 max. sand .
SQ pump has single-phase motor and runs at constant speed.
SQE pump has MS single-phase motor that is connected to Cu 301 control unit. The pump needs to be protected against the dry running. SQE pump modulates the speed by frequency control, this makes it possible to set the pump on an operating point in the performance curve.
During operation, in order to maintain a constant pressure, CU 301 unit regulates the pump speed.
In absence of consumption, pump fills the vessel and stops after a few seconds.

### VARIABLE SPEED

The MSE3 motor allows speed control raged from 65% to 100% of the performance pump curve.

### CU301 CONTROL UNIT

CU301 is a control and communicate unit for SQE pumps in constant pressure applications.
The CU301 control unit ensures:

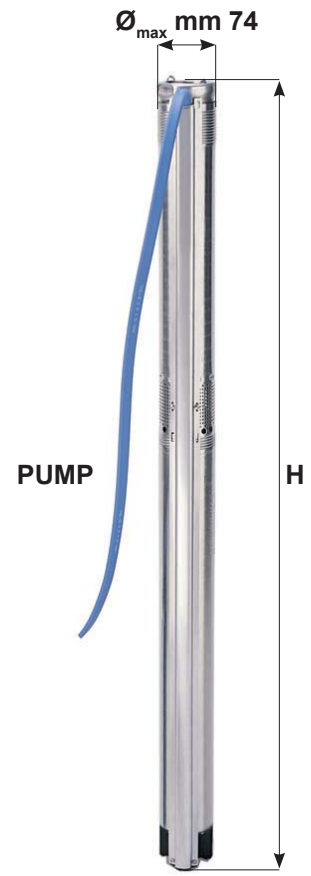
- pressure adjustment
- alarm LED indicating the necessary maintenance in the following cases: in absence of contact with the pump, overvoltage and undervoltage, overload, overtemperature, speed decrease, faulty sensor;
- start, stop and reinstating pump with the touch of a button;
- optional communication with the R100 remote control (CU 301 control unit ready to use, just set the maintenance pressure)

### R100 REMOTE CONTROL

By the Cu 301 cordless remote control it’s possible to monitoring: the absorbed power , speed and functioning number of hours, to change the max speed, the max pressure and the set-point.

### INSTALLATION

The SQ and SQE pumps can be installed in vertical or horizontal way (cooling jacket suggested) or in another position provided the motor never be above the horizontal plane of the pump.




EXPANSION TANK

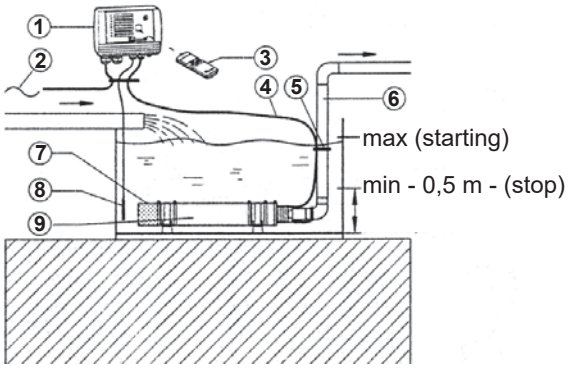
PRESSURE SENSOR AND CABLE

CONTROL UNIT

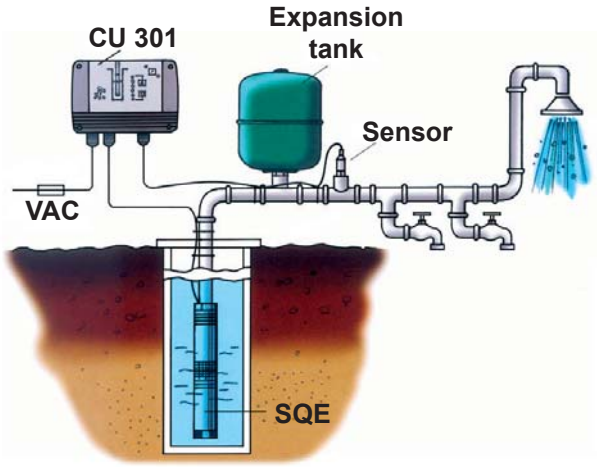
REMOTE CONTROL

| SUBMERSIBLE PUMPS 3” - (2800 RPM - 50 Hz) - TOTAL MANOMETRIC HEADS IN METERS | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | FLOW | | | | | | | | | | | | | | | Pump unit and motor | |
| | | Nom. pow. | Sing. ph. 230 V | l/m | 0 | 8 | 17 | 25 | 34 | 42 | 50 | 58 | 67 | 83 | 100 | 117 | 133 | 150 | Outlet threaded | H | Weight |
| Type | Code | Kw | A | l/s | 0 | 0,14 | 0,28 | 0,42 | 0,56 | 0,70 | 0,83 | 0,97 | 1,11 | 1,39 | 1,67 | 1,95 | 2,22 | 2,50 | | mm | kg |
| | | | | m3/h | 0 | 0,5 | 1,0 | 1,5 | 2,0 | 2,5 | 3,0 | 3,5 | 4,0 | 5,0 | 6,0 | 7,0 | 8,0 | 9,0 | | | |
| SQE 2 - 35 | PSM171 | 0,45 | 2,9 | M.C.A | 45 | 43 | 42 | 39 | 35 | 29 | 19 | | | | | | | | 1”¼ | 747 | 4,7 |
| SQE 2 - 55 | PSM172 | 0,65 | 4,1 | | 68 | 66 | 63 | 60 | 54 | 45 | 32 | | | | | | | | | | 4,8 |
| SQE 2 - 70 | PSM173 | 0,87 | 5,3 | | 89 | 87 | 84 | 79 | 72 | 60 | 43 | | | | | | | | | 774 | 5,4 |
| SQE 2 - 85 | PSM174 | 0,98 | 6,0 | | 109 | 108 | 105 | 99 | 89 | 74 | 54 | | | | | | | | | 828 | 5,5 |
| SQE 2 - 100 | PSM175 | 1,30 | 7,7 | | 132 | 131 | 128 | 120 | 109 | 91 | 67 | | | | | | | | | 864 | 6,2 |
| SQE 2 - 115 | PSM176 | 1,50 | 8,9 | | 155 | 154 | 150 | 142 | 129 | 108 | 79 | | | | | | | | | 891 | 6,3 |
| SQE 3 - 30 | PSM178 | 0,44 | 2,9 | | 36 | | | 34 | 32 | 30 | 26 | 22 | | | | | | | | 747 | 4,8 |
| SQE 3 - 40 | PSM179 | 0,63 | 4,0 | | 56 | | | 53 | 50 | 47 | 42 | 36 | | | | | | | | | |
| SQE 3 - 55 | PSM180 | 0,83 | 5,1 | | 74 | | | 70 | 67 | 63 | 56 | 48 | | | | | | | | 774 | 5,4 |
| SQE 3 - 65 | PSM185 | 1,02 | 6,2 | | 92 | | | 87 | 83 | 78 | 70 | 60 | | | | | | | | 828 | 5,5 |
| SQE 3 - 80 | PSM186 | 1,23 | 7,4 | | 110 | | | 105 | 100 | 94 | 85 | 73 | | | | | | | | 864 | 6,1 |
| SQE 3 - 95 | PSM187 | 1,43 | 8,4 | | 129 | | | 123 | 117 | 109 | 99 | 85 | | | | | | | | 891 | 6,3 |
| SQE 3 - 105 | PSM188 | 1,63 | 9,7 | | 147 | | | 140 | 134 | 125 | 113 | 97 | | | | | | | | 945 | 6,4 |
| SQE 5 - 15 | PSM159 | 0,26 | 1,9 | | 18 | | | | | | 15 | 14 | 13 | 11 | 7 | | | | 1”½ | 747 | 4,7 |
| SQE 5 - 25 | PSM160 | 0,54 | 3,4 | | 36 | | | | | | 31 | 29 | 28 | 24 | 18 | | | | | | 4,8 |
| SQE 5 - 35 | PSM161 | 0,80 | 4,9 | | 54 | | | | | | 46 | 44 | 42 | 36 | 28 | | | | | 864 | 5,5 |
| SQE 5 - 50 | PSM162 | 1,08 | 6,5 | | 71 | | | | | | 62 | 59 | 56 | 49 | 38 | | | | | | |
| SQE 5 - 60 | PSM165 | 1,33 | 7,9 | | 89 | | | | | | 77 | 74 | 70 | 61 | 48 | | | | | 945 | 6,4 |
| SQE 5 - 70 | PSM166 | 1,60 | 9,5 | | 106 | | | | | | 93 | 89 | 85 | 73 | 58 | | | | | | |
| SQE 7 - 15 | PSM167 | 0,42 | 2,8 | | 21 | | | | | | | 17 | 16 | 14 | 12 | 9 | 6 | 2 | | 747 | 4,7 |
| SQE 7 - 30 | PSM168 | 0,84 | 5,2 | | 42 | | | | | | | 36 | 35 | 32 | 29 | 24 | 18 | 10 | | | 5,2 |
| SQE 7 - 40 | PSM169 | 1,27 | 7,6 | | 64 | | | | | | | 56 | 54 | 50 | 45 | 38 | 29 | 19 | | 864 | 6,1 |

N.B.: hydraulic details of SQ pumps series are egual to the SQE series.

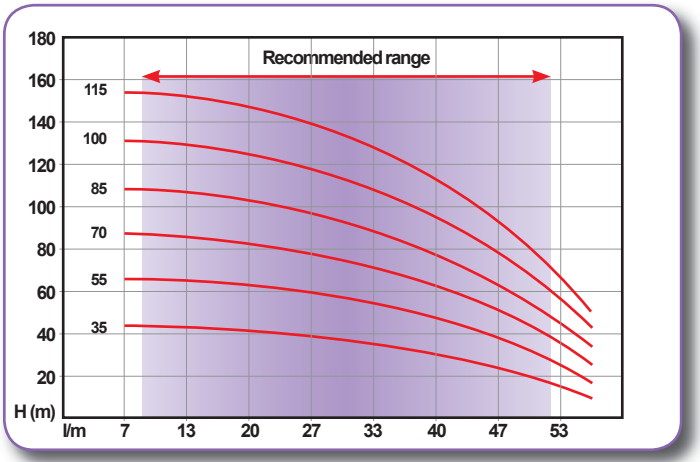



1. **Control unit**
2. **Connection to the net**
3. **Remote control**
4. **Cable**
5. **Cable clamp**
6. **Outlet pipe**
7. **Cooling**
8. **Level probe**
9. **Pump**

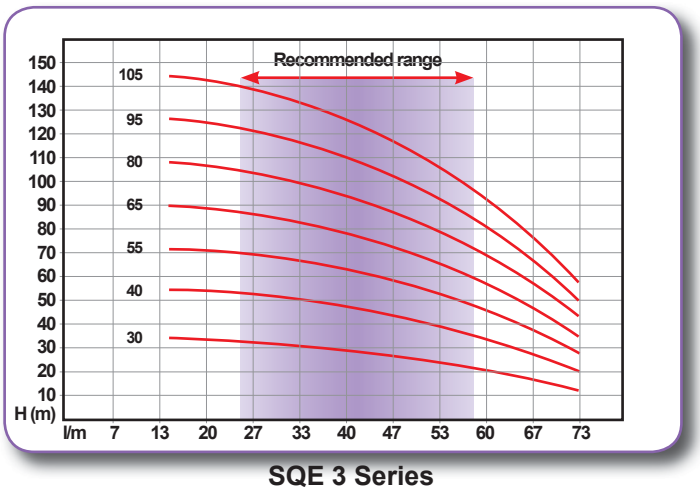



| Accessories | | |
|---|---|---|
| Description | Type | Code |
| Unit control | CU 301 1 x 230 V | EUN001 |
| Jar expansion | 5 LITRI | FID030 |
| Cable sensor pressure 0-6 bar | X CU 301 | SPUN010 |
| Remote | R100 | EAC001 |

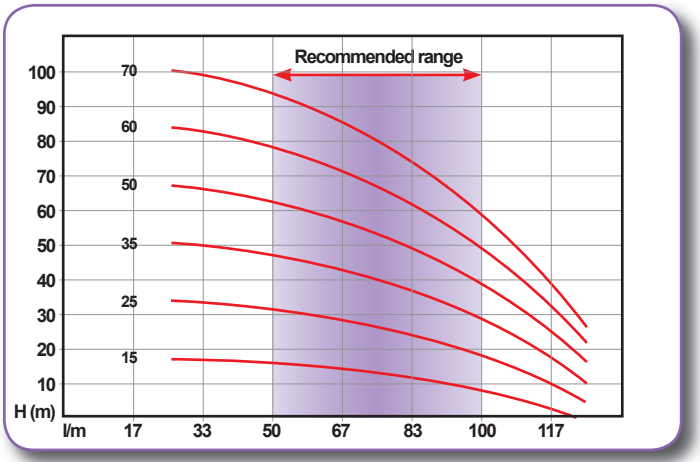
## OPERATING CURVES



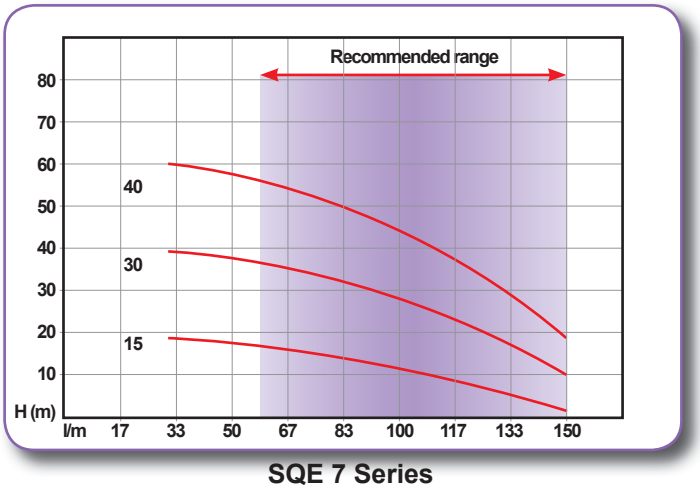

SQE 2 Series




SQE 3 Series




SQE 5 Series




SQE 7 Series

## ► SUBMERSIBLE PUMPS Ø 4”

# 4H SERIES SINGLE-PHASE (230V) VARIABLE SPEED

**FEATURES**

4HS is a submersible bore-hole pumps for 4” range, equipment:

- Three-phase asynchronous motor with water wetted rotor, jacketed and resin coated stator, AISI 304 s/s.
- Built-in inverter on the edge controlled by Cm module
- AISI 304 s/s multi-stage pump

The operation by the inverter allows to:

- To modify the pump rotation speed to maintain the required pressure constant when varying the hydric request. In this way pump operate just in case of need to avoid energy waste.
- Switch on/off the pump slowly to reduce absorption peaks , mechanical stress and water hammer.
- To protect the motor and the operating from overload, overvoltage, undervoltage, dry running and faults.
- 4HS can be used for industrial and domestic applications to supply water and for pressurization and irrigation. The construction features and specific materials, make the 4HS pumps suitable for drinking water use too.

The monoblock shaft reduces unbalance and vibrations to make the system silent and long lasting.
The motor with jacket stator, AISI 304, is resin coated high conductivity, so the 4HS submersible pumps can operate into the deep hot water.
The water wetted rotor maintains the radial alignment and supports the axial push by bushings and thrust bearing hydrodynamic.
The MTN built-in inverter module, is totally made by AISI 304 s/s and contains the power electronic board submerged in a special high conductivity resin. This guarantees a long service life of the electronic components and gives extreme mechanical strength to module against shocks, vibrations and external pressures.
AISI 304 precision cast power supply for a cable quick substitution.
CM module control, totally made by aluminium and IP55 degree of protection, set the pump functioning and regulates the speed to maintains the pressure desired independently of hydric request. It is enough to connect the pressure sensor in included in the box and to configure the pump. During the functioning the CM monitors the system and transmits information about electric, hydraulic and thermal pump parameters, ensuring a total protection from overvoltage, undervoltage, overload and dry running.

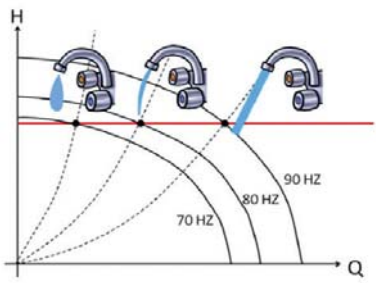
**INSTALLATION**

For the constant pressure functioning, it’s enough to install the 4S pump connecting it to the control module and the pressure sensor. The small expansion vessel compensates the losses when pump is switched off.

4HS range submersible pumps kit includes:

- 4HS pump with 2,5 m flat cable ACS-WRAS-KTM
- modul control (CM)
- junction cable kit
- 0-16 bar sensor pressure
- use and installation instructions

| SUBMERSIBLE PUMPS 4” - VARIABLE SPEED - TOTAL MANOMETRIC HEADS IN METERS | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | FLOW | | | | | | | | | | | | Package weight |
| | | | l/m | 0 | 8 | 17 | 25 | 34 | 42 | 50 | 67 | 83 | 100 | 133 | 150 | |
| Type | Code | Hz | m³/h | 0 | 0,5 | 1,0 | 1,5 | 2,0 | 2,5 | 3,0 | 4,0 | 5,0 | 6,0 | 8,0 | 9,0 | kg |
| 4HS - 02/04 Pmax = 1,1 kW | PMK006 | 50 | | 18 | | 16 | | 12 | | | | | | | | 22 |
| | | 60 | | 26 | | 24 | | 19 | | | | | | | | |
| | | 70 | | 34 | | 33 | | 28 | | 21 | | | | | | |
| | | 80 | | 45 | | 43 | | 38 | | 31 | 20 | | | | | |
| | | 90 | | 58 | | 55 | | 50 | | 42 | 32 | | | | | |
| | | 100 | | 70 | | 68 | | 64 | | 56 | 46 | | | | | |
| | | 110 | | 85 | | 83 | | 78 | | 70 | 60 | 47 | | | | |
| 4HS - 04/03 Pmax = 1,4 kW | PMK004 | 50 | | 23 | 20 | 15 | 7 | | | | | | | | | |
| | | 60 | | 34 | 30 | 24 | 16 | | | | | | | | | |
| | | 70 | | 46 | 42 | 36 | 28 | 16 | | | | | | | | |
| | | 80 | | 60 | 56 | 48 | 40 | 28 | | | | | | | | |
| | | 90 | | 75 | 70 | 64 | 56 | 44 | 28 | | | | | | | |
| | | 100 | | 96 | 88 | 80 | 72 | 60 | 44 | 25 | | | | | | |
| | | 110 | | 112 | 105 | 98 | 90 | 78 | 64 | 45 | | | | | | |
| 4HS - 04/05 Pmax = 2,0 kW | PMK001 | 50 | | 45 | 40 | 30 | 12 | | | | | | | | | 24 |
| | | 60 | | 66 | 60 | 50 | 32 | | | | | | | | | |
| | | 70 | | 90 | 82 | 70 | 55 | 30 | | | | | | | | |
| | | 80 | | 120 | 110 | 97 | 80 | 55 | | | | | | | | |
| | | 90 | | 150 | 140 | 128 | 110 | 86 | 55 | | | | | | | |
| | | 100 | | 185 | 172 | 160 | 142 | 120 | 90 | 50 | | | | | | |
| | | 105 | | 205 | 190 | 180 | 160 | 135 | 105 | 70 | | | | | | |
| 4HS - 06/02 Pmax = 1,3 kW | PMK002 | 50 | | 12 | | | | 10 | | | 6 | | | | | 22 |
| | | 60 | | 18 | | | | 16 | | | 12 | | | | | |
| | | 70 | | 25 | | | | 22 | | | 18 | | 10 | | | |
| | | 80 | | 32 | | | | 29 | | | 25 | | 18 | | | |
| | | 90 | | 41 | | | | 37 | | | 33 | | 26 | | | |
| | | 100 | | 50 | | | | 46 | | | 42 | | 35 | 25 | | |
| | | 110 | | 61 | | | | 56 | | | 52 | | 45 | 36 | 29 | |
| 4HS - 06/04 Pmax = 2,2 kW | PMK005 | 50 | | 23 | | | | 21 | | | 12 | | | | | 24 |
| | | 60 | | 36 | | | | 32 | | | 24 | | | | | |
| | | 70 | | 50 | | | | 44 | | | 36 | | 20 | | | |
| | | 80 | | 66 | | | | 58 | | | 50 | | 36 | | | |
| | | 90 | | 82 | | | | 74 | | | 66 | | 52 | | | |
| | | 100 | | 102 | | | | 92 | | | 84 | | 72 | 50 | | |
| | | 105 | | 112 | | | | 104 | | | 92 | | 80 | 60 | 48 | |
| Motor | | V in = 1x230V ± 15% | | | | | | | | | | | | | | |
| | | 50/60 Hz | | | | | | | | | | | | | | |
| Overall dimensions packaging: 139 x 22 x 16 cm | | | | | | | | | | | | | | | | |




Control module, thanks to the sensor pressure signal, changes the pump speed to maintains the settled pressure constant independently of hydric request. Control modes to select:

- fixed frequency
- constant flow
- constant temperature

# Ø 4”SUBMERSIBLE PUMPS

**FEATURES OF USE**

- Compact, easy to maintain and newly designed pump.
- The rotating face seals are floating and independent.
- This reduces the hydraulic thrust on the bearing of the engine, extending the life and preventing fouling of the pump in the presence of sand (European patent)

**TECHNICAL DATA**

- Flow rates up to 21 $m^3$ / h
- Head up to 360 m
- Power up to 7,5 Kw
- Maximum fluid temperature: 30 ° C
- Maximum amount of sand: 185 $g/m^3$
- Maximum number of starts per hour: 15
- Minimum level recommended on the intake: 1 m

**PUMP**

- Impellers and diffusers in polycarbonate
- Non-toxic rubber guide bushingsr
- Ceramic shaft guide bushings
- Heads in AISI 304
- External pipe, shaft and other parts in AISI 304

**ENGINE**

- See on pagepagina 169

## 4A - 4B - 4D - 4E - 4F - 4H - 4L SERIES

**SUBMERSIBLE PUMPS 4” - (50 HZ - TWO POLE) - TOTAL MANOMETRIC HEADS IN METERS**

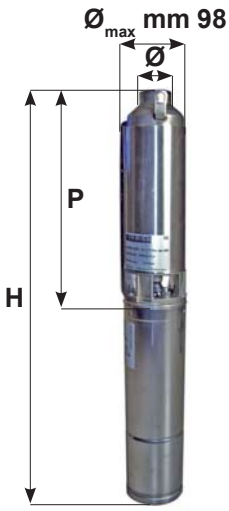
| Type | Pow. nom. Hp | Pow. nom. Kw | A 230 V | Cond. µF | A 400 V | | Flow Rate l/m | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 130 | 150 | 200 | 250 | 300 | 350 | In. Ø | Pump mm | Pump kg | Group H Singleph. mm | Group H Singleph. kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | l/s | 0 | 0,2 | 0,3 | 0,5 | 0,7 | 0,8 | 1,0 | 1,2 | 1,3 | 1,5 | 1,7 | 2,2 | 2,5 | 3,3 | 4,2 | 5,0 | 5,8 | | | | | |
| | | | | | | | m³/h | 0 | 0,6 | 1,2 | 1,8 | 2,4 | 3,0 | 3,6 | 4,2 | 4,8 | 5,4 | 6,0 | 7,8 | 9,0 | 12 | 15 | 18 | 21 | | | | | |
| 4A 005 N11 | 0,50 | 0,37 | 3,4 | 16 | 1,20 | | | 64 | 63 | 60 | 49 | 30 | 16 | | | | | | | | | | | | | 335 | 2,4 | 660 | 9,4 |
| 4A 007 N17 | 0,75 | 0,55 | 4,5 | 20 | 1,75 | | | 99 | 62 | 55 | 42 | 23 | 23 | | | | | | | | | | | | | 437 | 3,1 | 762 | 10,7 |
| 4A 010 N22 | 1,00 | 0,75 | 5,8 | 25 | 2,40 | | | 128 | 125 | 121 | 98 | 59 | 32 | | | | | | | | | | | | | 522 | 5,0 | 872 | 13,7 |
| 4A 015 N32 | 1,50 | 1,10 | 7,8 | 35 | 3,40 | | | 185 | 182 | 175 | 143 | 86 | 47 | | | | | | | | | | | | | 692 | 6,6 | 1.077 | 16,9 |
| 4A 020 N43 | 2,00 | 1,50 | 10,6 | 40 | 4,40 | | | 249 | 244 | 236 | 192 | 116 | 63 | | | | | | | | | | | | | 879 | 8,5 | 1.299 | 20,5 |
| 4A 030 N62 | 3,00 | 2,20 | 14,9 | 50 | 6,00 | | | 359 | 352 | 340 | 277 | 168 | 90 | | | | | | | | | | | | | 1.202 | 11,8 | 1.672 | 26,0 |
| 4B 005 N07 | 0,50 | 0,37 | 3,4 | 16 | 1,20 | | | 45 | 43 | 40 | 35 | 27 | 15 | | | | | | | | | | | | | 293 | 2,6 | 618 | 9,6 |
| 4B 007 N11 | 0,75 | 0,55 | 4,5 | 20 | 1,75 | | | 71 | 68 | 62 | 55 | 42 | 23 | | | | | | | | | | | | | 373 | 3,4 | 698 | 11,0 |
| 4B 010 N15 | 1,00 | 0,75 | 5,8 | 25 | 2,40 | | | 96 | 92 | 85 | 75 | 57 | 32 | | | | | | | | | | | | | 453 | 4,2 | 803 | 12,9 |
| 4B 015 N22 | 1,50 | 1,10 | 7,8 | 35 | 3,40 | | | 141 | 135 | 125 | 110 | 84 | 47 | | | | | | | | | | | | | 593 | 5,5 | 978 | 15,8 |
| 4B 020 N29 | 2,00 | 1,50 | 10,6 | 40 | 4,40 | | | 186 | 178 | 164 | 145 | 111 | 61 | | | | | | | | | | | | | 733 | 6,9 | 1.153 | 18,9 |
| 4B 030 N42 | 3,00 | 2,20 | 14,9 | 50 | 6,00 | | | 270 | 258 | 238 | 210 | 160 | 89 | | | | | | | | | | | | | 993 | 9,4 | 1.463 | 23,6 |
| 4B 040 N56 | 4,00 | 3,00 | | | 7,90 | | | 360 | 344 | 318 | 280 | 214 | 119 | | | | | | | | | | | | | 1.273 | 12,1 | | |
| 4D 005 N05 | 0,50 | 0,37 | 3,4 | 16 | 1,20 | | | 33 | | 32 | 31 | 30 | 27 | 23 | 18 | | | | | | | | | | | 253 | 2,2 | 578 | 9,2 |
| 4D 007 N07 | 0,75 | 0,55 | 4,5 | 20 | 1,75 | | | 46 | | 45 | 44 | 41 | 37 | 32 | 25 | | | | | | | | | | 1”¼ | 293 | 2,6 | 618 | 10,2 |
| 4D 010 N10 | 1,00 | 0,75 | 5,8 | 25 | 2,40 | | | 66 | | 64 | 63 | 59 | 54 | 46 | 35 | | | | | | | | | | | 353 | 3,2 | 703 | 11,9 |
| 4D 015 N15 | 1,50 | 1,10 | 7,8 | 35 | 3,40 | | | 100 | | 97 | 94 | 89 | 80 | 69 | 53 | | | | | | | | | | | 453 | 4,2 | 838 | 14,5 |
| 4D 020 N20 | 2,00 | 1,50 | 10,6 | 40 | 4,40 | | | 133 | | 129 | 125 | 118 | 107 | 92 | 70 | | | | | | | | | | | 533 | 5,1 | 973 | 17,1 |
| 4D 030 N29 | 3,00 | 2,20 | 14,9 | 50 | 6,00 | | | 192 | | 187 | 181 | 171 | 155 | 133 | 102 | | | | | | | | | | | 733 | 6,9 | 1.203 | 21,1 |
| 4D 040 N40 | 4,00 | 3,00 | | | 7,90 | | | 265 | | 258 | 250 | 236 | 214 | 184 | 140 | | | | | | | | | | | 953 | 9,0 | | |
| 4D 055 N52 | 5,50 | 4,00 | | | 10,00 | | | 345 | | 335 | 325 | 307 | 278 | 239 | 182 | | | | | | | | | | | 1.193 | 11,3 | | |
| 4E 005 N04 | 0,50 | 0,37 | 3,4 | 16 | 1,20 | | | 28 | | | 26 | 25 | 23 | 21 | 18 | 15 | 12 | | | | | | | | | 233 | 2,0 | 558 | 9,0 |
| 4E 007 N06 | 0,75 | 0,55 | 4,5 | 20 | 1,75 | | | 41 | | | 39 | 37 | 35 | 31 | 27 | 23 | 17 | | | | | | | | | 273 | 2,4 | 598 | 10,0 |
| 4E 010 N08 | 1,00 | 0,75 | 5,8 | 25 | 2,40 | | | 55 | | | 52 | 49 | 46 | 41 | 36 | 31 | 23 | | | | | | | | | 313 | 2,8 | 663 | 11,5 |
| 4E 015 N12 | 1,50 | 1,10 | 7,8 | 35 | 3,40 | | | 83 | | | 78 | 74 | 69 | 62 | 54 | 46 | 35 | | | | | | | | | 393 | 3,6 | 778 | 13,9 |
| 4E 020 N16 | 2,00 | 1,50 | 10,6 | 40 | 4,40 | M.C.A | | 110 | | | 104 | 99 | 92 | 83 | 72 | 61 | 47 | | | | | | | | | 473 | 4,4 | 893 | 16,4 |
| 4E 030 N24 | 3,00 | 2,20 | 14,9 | 50 | 6,00 | | | 165 | | | 156 | 148 | 138 | 124 | 109 | 92 | 70 | | | | | | | | | 633 | 6,0 | 1.103 | 20,2 |
| 4E 040 N32 | 4,00 | 3,00 | | | 7,90 | | | 220 | | | 208 | 198 | 184 | 166 | 145 | 122 | 93 | | | | | | | | | 793 | 7,6 | | |
| 4E 055 N44 | 5,50 | 4,00 | | | 10,00 | | | 303 | | | 286 | 272 | 253 | 228 | 199 | 168 | 128 | | | | | | | | | 1.033 | 10,0 | | |
| 4F 010 N05 | 1,00 | 0,75 | 5,8 | 25 | 2,40 | | | 34 | | | | 31 | 30 | 29 | 28 | 26 | 25 | 24 | 18 | 13 | | | | | | 341 | 2,9 | 691 | 11,6 |
| 4F 015 N08 | 1,50 | 1,10 | 7,8 | 35 | 3,40 | | | 54 | | | | 50 | 48 | 46 | 44 | 42 | 40 | 38 | 29 | 20 | | | | | | 456 | 3,9 | 841 | 14,2 |
| 4F 020 N11 | 2,00 | 1,50 | 10,6 | 40 | 4,40 | | | 74 | | | | 68 | 66 | 63 | 61 | 58 | 55 | 52 | 40 | 28 | | | | | | 572 | 4,9 | 992 | 16,9 |
| 4F 030 N16 | 3,00 | 2,20 | 14,9 | 50 | 6,00 | | | 107 | | | | 99 | 96 | 92 | 88 | 84 | 80 | 75 | 58 | 40 | | | | | | 764 | 6,5 | 1.234 | 20,7 |
| 4F 040 N22 | 4,00 | 3,00 | | | 7,90 | | | 147 | | | | 137 | 132 | 127 | 121 | 116 | 110 | 103 | 79 | 55 | | | | | | 995 | 8,5 | | |
| 4F 055 N30 | 5,50 | 4,00 | | | 10,00 | | | 201 | | | | 186 | 180 | 173 | 165 | 158 | 150 | 141 | 108 | 75 | | | | | | 1.303 | 11,1 | | |
| 4F 075 N40 | 7,50 | 5,50 | | | 14,40 | | | 268 | | | | 248 | 241 | 230 | 220 | 210 | 200 | 188 | 144 | 100 | | | | | | 1.688 | 14,4 | | |
| 4F 100 N50 | 10,00 | 7,50 | | | 19,50 | | | 335 | | | | 310 | 301 | 288 | 275 | 263 | 250 | 235 | 180 | 125 | | | | | | 2.073 | 17,7 | | |
| 4H 015 N05 | 1,50 | 1,10 | 7,8 | 35 | 3,40 | | | 36 | | | | | | | 34 | 33 | 32 | 32 | 29 | 27 | 16 | | | | | 341 | 2,9 | 726 | 13,2 |
| 4H 020 N07 | 2,00 | 1,50 | 10,6 | 40 | 4,40 | | | 50 | | | | | | | 47 | 46 | 45 | 44 | 40 | 37 | 22 | | | | | 418 | 3,5 | 838 | 15,5 |
| 4H 030 N10 | 3,00 | 2,20 | 14,9 | 50 | 6,00 | | | 71 | | | | | | | 68 | 66 | 65 | 63 | 58 | 51 | 32 | | | | 2” | 533 | 4,5 | 1.003 | 18,7 |
| 4H 040 N14 | 4,00 | 3,00 | | | 7,90 | | | 100 | | | | | | | 95 | 93 | 90 | 88 | 80 | 72 | 44 | | | | | 687 | 5,8 | | |
| 4H 055 N19 | 5,50 | 4,00 | | | 10,00 | | | 136 | | | | | | | 129 | 126 | 123 | 120 | 110 | 98 | 60 | | | | | 880 | 7,4 | | |
| 4H 075 N27 | 7,50 | 5,50 | | | 14,40 | | | 193 | | | | | | | 183 | 179 | 174 | 170 | 156 | 140 | 85 | | | | | 1.188 | 10,0 | | |
| 4H 100 N36 | 10,00 | 7,50 | | | 19,50 | | | 257 | | | | | | | 244 | 238 | 233 | 227 | 206 | 186 | 113 | | | | | 1.534 | 13,0 | | |
| 4L 020 N05 | 2,00 | 1,50 | 10,6 | 40 | 4,40 | | | 34 | | | | | | | | | | | | 24 | 21 | 17 | 12 | 7 | | 363 | 3,0 | 783 | 15,0 |
| 4L 030 N08 | 3,00 | 2,20 | 14,9 | 50 | 6,00 | | | 54 | | | | | | | | | | | | 39 | 33 | 27 | 20 | 12 | | 491 | 4,1 | 961 | 18,3 |
| 4L 040 N11 | 4,00 | 3,00 | | | 7,90 | | | 74 | | | | | | | | | | | | 53 | 46 | 37 | 27 | 16 | | 620 | 5,2 | | |
| 4L 055 N15 | 5,50 | 4,00 | | | 10,00 | | | 101 | | | | | | | | | | | | 73 | 62 | 51 | 37 | 22 | | 792 | 6,6 | | |
| 4L 075 N20 | 7,50 | 5,50 | | | 14,40 | | | 134 | | | | | | | | | | | | 97 | 83 | 67 | 49 | 30 | | 1.006 | 8,4 | | |
| 4L 100 N27 | 10,00 | 7,50 | | | 19,50 | | | 181 | | | | | | | | | | | | 131 | 112 | 91 | 67 | 40 | | 1.306 | 10,9 | | |

**N.B.: performance 4L series with valve retention**

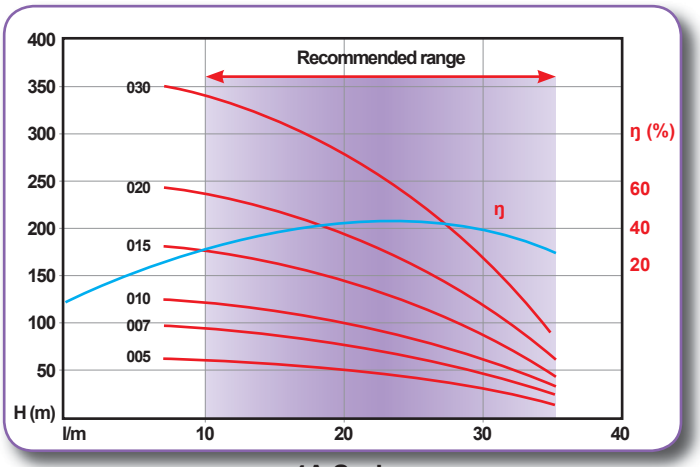
CODES SUBMERGIBLE ELECTRIC PUMPS Ø 4” OIL ENGINE•

| Description | Type | HP | Kw | µF | | 230V | 400V | Only pump |
|---|---|---|---|---|---|---|---|---|
| 4A Series 5 ÷ 35 l/m 352 ÷ 16 m.c.a. | 4A 005 N11 | 0,50 | 0,37 | 16 | | PSSM050 | PSST050 | PCPS061 |
| | 4A 007 N17 | 0,75 | 0,55 | 20 | | PSSM051 | PSST051 | PCPS019 |
| | 4A 010 N22 | 1,00 | 0,75 | 25 | | PSSM052 | PSST052 | PCPS018 |
| | 4A 015 N32 | 1,50 | 1,10 | 35 | | PSSM053 | PSST053 | PCPS060 |
| | 4A 020 N43 | 2,00 | 1,50 | 40 | | PSSM054 | PSST054 | PCPS009 |
| | 4A 030 N62 | 3,00 | 2,20 | 50 | | PSSM055 | PSST055 | PCPS008 |
| 4B Series 5 ÷ 50 l/m - 355 ÷ 15 m.c.a. | 4B 005 N07 | 0,50 | 0,37 | 16 | | PSSM060 | PSST060 | PCPS001 |
| | 4B 007 N11 | 0,75 | 0,55 | 20 | | PSSM061 | PSST061 | PCPS002 |
| | 4B 010 N15 | 1,00 | 0,75 | 25 | | PSSM062 | PSST062 | PCPS003 |
| | 4B 015 N22 | 1,50 | 1,10 | 35 | | PSSM063 | PSST063 | PCPS004 |
| | 4B 020 N29 | 2,00 | 1,50 | 40 | | PSSM064 | PSST064 | PCPS005 |
| | 4B 030 N42 | 3,00 | 2,20 | 50 | | PSSM065 | PSST065 | PCPS006 |
| | 4B 040 N56 | 4,00 | 3,00 | | | | PSST066 | PCPS007 |
| 4D Series 20 ÷ 70 l/m - 355 ÷ 18 m.c.a. | 4D 005 N05 | 0,50 | 0,37 | 16 | | PSSM010 | PSST010 | PCPS010 |
| | 4D 007 N07 | 0,75 | 0,55 | 20 | | PSSM011 | PSST011 | PCPS010 |
| | 4D 010 N10 | 1,00 | 0,75 | 25 | | PSSM012 | PSST012 | PCPS012 |
| | 4D 015 N15 | 1,50 | 1,10 | 35 | | PSSN013 | PSST013 | PCPS013 |
| | 4D 020 N20 | 2,00 | 1,50 | 40 | | PSSM014 | PSST014 | PCPS014 |
| | 4D 030 N29 | 3,00 | 2,20 | 50 | | PSSM015 | PSST015 | PCPS015 |
| | 4D 040 N40 | 4,00 | 3,00 | | | | PSST016 | PCPS016 |
| | 4D 055 N52 | 5,50 | 4,00 | | | | PSST017 | PCPS017 |
| 4E Series 30 ÷ 90 l/m - 286 ÷ 12 m.c.a. | 4E 005 N04 | 0,50 | 0,37 | 16 | | PSSM030 | PSST040 | PCPS053 |
| | 4E 007 N06 | 0,75 | 0,55 | 20 | | PSSM031 | PSST041 | PCPS062 |
| | 4E 010 N08 | 1,00 | 0,75 | 25 | | PSSM032 | PSST042 | PCPS054 |
| | 4E 015 N12 | 1,50 | 1,10 | 35 | CODICI | PSSM033 | PSST043 | PCPS055 |
| | 4E 020 N16 | 2,00 | 1,50 | 40 | | PSSM034 | PSST044 | PCPS056 |
| | 4E 030 N24 | 3,00 | 2,20 | 50 | | PSSN035 | PSST045 | PCPS057 |
| | 4E 040 N32 | 4,00 | 3,00 | | | | PSST046 | PCPS063 |
| | 4E 055 N44 | 5,50 | 4,00 | | | | PSST047 | PCPS064 |
| 4F Series 40 ÷ 150 l/m - 310 ÷ 13 m.c.a. | 4F 010 N05 | 1,00 | 0,75 | 25 | | PSSM020 | PSST020 | PCPS020 |
| | 4F 015 N08 | 1,50 | 1,10 | 35 | | PSSM021 | PSST021 | PCPS021 |
| | 4F 020 N11 | 2,00 | 1,50 | 40 | | PSSM022 | PSST022 | PCPS022 |
| | 4F 030 N16 | 3,00 | 2,20 | 50 | | PSSM023 | PSST023 | PCPS023 |
| | 4F 040 N22 | 4,00 | 3,00 | | | | PSST024 | PCPS024 |
| | 4F 055 N30 | 5,50 | 4,00 | | | | PSST025 | PCPS025 |
| | 4F 075 N40 | 7,50 | 5,50 | | | | PSST026 | PCPS026 |
| | 4F 100 N50 | 10,00 | 7,50 | | | | PSST027 | PCPS027 |
| 4H Series 70 ÷ 200 l/m - 224 ÷ 16 m.c.a. | 4H 015 N05 | 1,50 | 1,10 | 35 | | PSSM070 | PSST030 | PCPS030 |
| | 4H 020 N07 | 2,00 | 1,50 | 40 | | PSSM071 | PSST031 | PCPS031 |
| | 4H 030 N10 | 3,00 | 2,20 | 50 | | PSSM072 | PSST032 | PCPS032 |
| | 4H 040 N14 | 4,00 | 3,00 | | | | PSST033 | PCPS033 |
| | 4H 055 N19 | 5,50 | 4,00 | | | | PSST034 | PCPS034 |
| | 4H 075 N27 | 7,50 | 5,50 | | | | PSST035 | PCPS035 |
| | 4H 100 N36 | 10,00 | 7,50 | | | | PSST036 | PCPS036 |
| 4L Series 150 ÷ 350 l/m 131 ÷ 7 m.c.a. | 4L 020 N05 | 2,00 | 1,50 | 40 | | PSSM080 | PSST080 | PCPS040 |
| | 4L 030 N08 | 3,00 | 2,20 | 50 | | PSSM081 | PSST081 | PCPS041 |
| | 4L 040 N11 | 4,00 | 3,00 | | | | PSST082 | PCPS042 |
| | 4L 055 N15 | 5,50 | 4,00 | | | | PSST083 | PCPS043 |
| | 4L 075 N20 | 7,50 | 5,50 | | | | PSST084 | PCPS044 |
| | 4L 100 N27 | 10,00 | 7,50 | | | | PSST085 | PCPS045 |

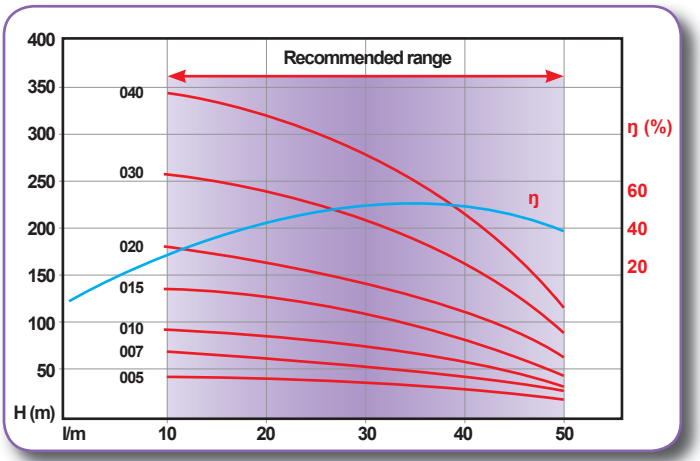
• **on request water engine**



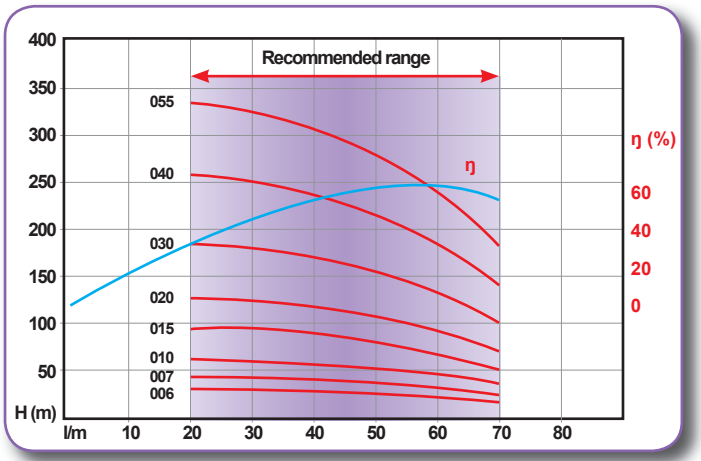

## OPERATING CURVES



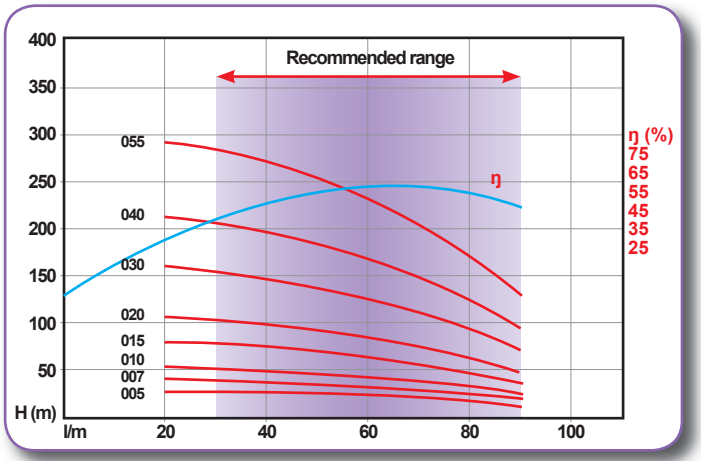

4A Series



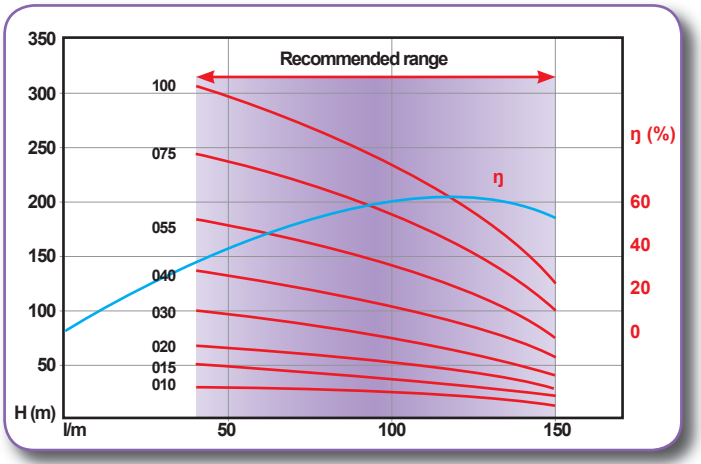

4B Series



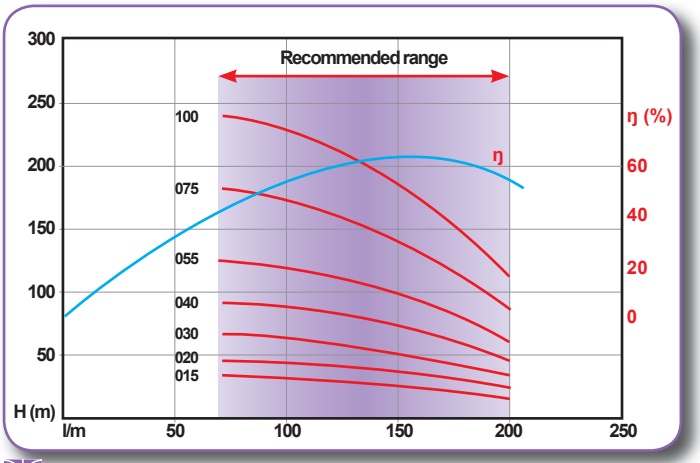

4D Series



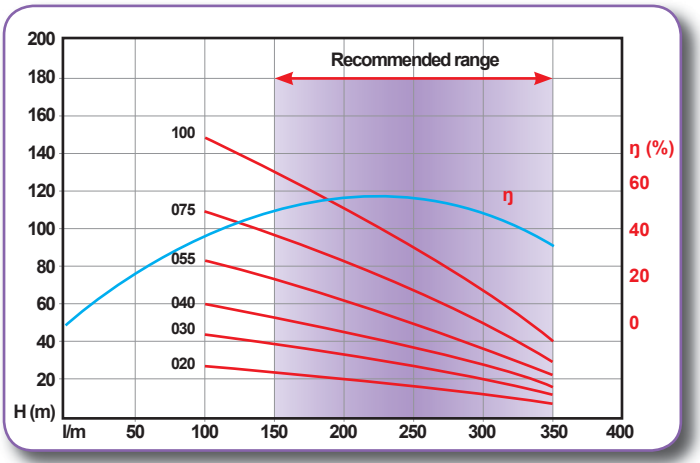

4E Series




4F Series




4H Series




4L Series

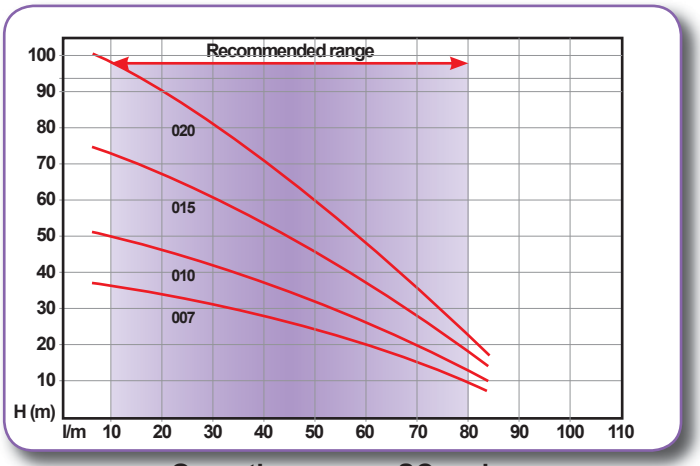
## ► SUBMERSIBLE PUMPS Ø 5”

### OPERATING DATA

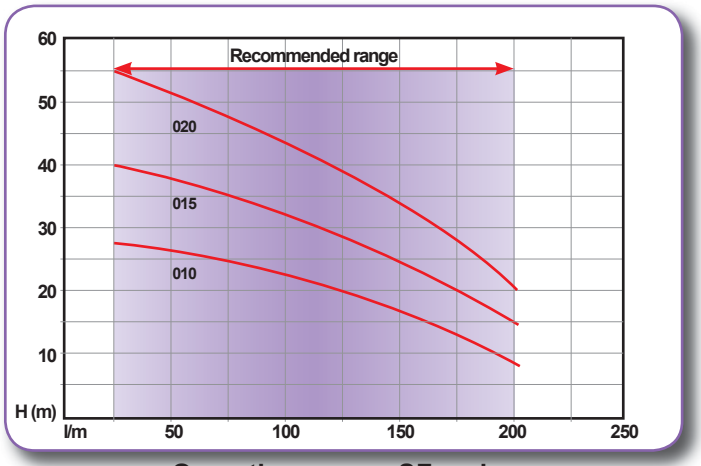
Max supply voltage respect to the rated voltage: +/-5% • max fluid temperature that flows around the motor, with jacket free from scale deposits: 30° with 0,3 m/sec speed - 34° with 1,2 m/sec speed • max number of starts/h = 40

### TECHNICAL DETAILS

Removable and interchangeable cable – connector • shaft extension in AISI 316 • silicon carbide mechanical seal • pressed brass supports • hermetic stator, with AISI 304 s/s jacket • float applicable to single-phase motor pumps




Operating curves SC series




Operating curves SF series

| Submersible pumps Ø 5”• | | | | | |
|---|---|---|---|---|---|
| Description | Type | HP | Kw | µF | Code |
| SC series without floating<br>10 ÷ 80 lt/m<br>96 ÷ 9 m.c.a. - monophase | SC 007 N03 | 0,75 | 0,55 | 16 | PSSC007 |
| | SC 010 N04 | 1,00 | 0,75 | 20 | PSSC008 |
| | SC 015 N06 | 1,50 | 1,10 | 25 | PSSC009 |
| | SC 020 N08 | 2,00 | 1,50 | 35 | PSSC010 |
| SC series with floating<br>10 ÷ 80 lt/m<br>96 ÷ 9 m.c.a. - monophase | SC 007 N03 | 0,75 | 0,55 | 16 | PSSC015 |
| | SC 010 N04 | 1,00 | 0,75 | 20 | PSSC016 |
| | SC 015 N06 | 1,50 | 1,10 | 25 | PSSC017 |
| | SC 020 N08 | 2,00 | 1,50 | 35 | PSSC018 |
| Description | Type | HP | Kw | | Code |
| SC series<br>10 ÷ 80 lt/m<br>96 ÷ 9 m.c.a. - threephase | SC 007 N03 | 0,75 | 0,55 | | PSSC057 |
| | SC 010 N04 | 1,00 | 0,75 | | PSSC058 |
| | SC 015 N06 | 1,50 | 1,10 | | PSSC059 |
| | SC 020 N08 | 2,00 | 1,50 | | PSSC060 |
| Description | Type | HP | Kw | µF | Code 230V | Code 400V |
| SF series<br>25 ÷ 200 lt/m<br>55 ÷ 10 m.c.a. | SF 010 N02 | 1,00 | 0,75 | 20 | PSSF002 | PSSF010 |
| | SF 015 N03 | 1,50 | 1,10 | 25 | PSSF003 | PSSF011 |
| | SF 020 N04 | 2,00 | 1,50 | 35 | PSSF004 | PSSF012 |
| Floating with 10 mt cable H | | | | | | EGL900 |

• **Proved with 10 mt cable HO7RNF and termic included**

| SUBMERSIBLE PUMPS 5” - TOTAL MANOMETRIC HEADS IN METERS | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Nom. pow. | | Sing. ph. 230 V | | Th. ph. 400 V | FLOW | | | | | | | | | | | | | | | | Mand. | Pump unit and motor | |
| | | | | | | l/m | 10 | 20 | 25 | 30 | 40 | 50 | 60 | 70 | 75 | 80 | 100 | 125 | 150 | 175 | 200 | | H | Weight |
| Type | Hp | Kw | A | µF | A | l/s | 0,17 | 0,33 | 0,42 | 0,50 | 0,67 | 0,83 | 1,00 | 1,17 | 1,25 | 1,34 | 1,67 | 2,09 | 2,50 | 2,92 | 3,33 | Ø | mm | kg |
| | | | | | | m³/h | 0,6 | 1,2 | 1,5 | 1,8 | 2,4 | 3,0 | 3,6 | 4,2 | 4,5 | 4,8 | 6,0 | 7,5 | 9,0 | 10,5 | 12,0 | | | |
| SC 007 N03 | 0,75 | 0,55 | 4,6 | 16 | 1,7 | M.C.A. | 35 | 33 | 32 | 30 | 26 | 22 | 18 | 14 | 12 | 9 | | | | | | 1”¼ | 420 | 10,0 |
| SC 010 N04 | 1,00 | 0,75 | 5,9 | 20 | 2,4 | | 50 | 45 | 43 | 41 | 35 | 30 | 25 | 18 | 14 | 11 | | | | | | | 477 | 11,5 |
| SC 015 N06 | 1,50 | 1,10 | 7,8 | 25 | 3,3 | | 72 | 67 | 64 | 60 | 52 | 45 | 35 | 26 | 21 | 16 | | | | | | | 544 | 13,0 |
| SC 020 N08 | 2,00 | 1,50 | 10,7 | 35 | 4,9 | | 96 | 90 | 88 | 85 | 70 | 60 | 47 | 35 | 28 | 21 | | | | | | | 640 | 16,1 |
| SF 010 N02 | 1,00 | 0,75 | 6,2 | 20 | 2,5 | | | | 28 | 27 | 26,5 | 26 | 25 | 24,5 | 24 | 23 | 22 | 20 | 16 | 13 | 10 | | 520 | 12,1 |
| SF 015 N03 | 1,50 | 1,10 | 8,1 | 25 | 3,5 | | | | 40 | 39 | 38,5 | 38 | 37 | 36 | 35 | 33 | 32 | 28 | 24 | 20 | 15 | | 580 | 13,5 |
| SF 020 N04 | 2,00 | 1,50 | 10,8 | 35 | 4,9 | | | | 55 | 54 | 52 | 51 | 50 | 49 | 48 | 46 | 44 | 39 | 34 | 28 | 20 | | 640 | 16,0 |

## ► SUBMERSIBLE PUMPS Ø 6”

### FEATURES OF USE

The submersible pumps for wells from 6 ‘’ are designed and built with advanced systems, hydraulics and electrical characteristics offer excellent. They can be used for the water supply to use civil and industrial water supply, fire protection systems, power for irrigation systems and any other type of plant.

### PERFORMANCE LIMITS

Pressure max: 700 m.c.a. • Temperature of pumped liquid: 30° C • Maximum flow rate: 66 mc / h • Maximum number of starts per hour: 15
Minimum level on the intake: 1 m

### MATERIALS

Valve bodies: ductile iron steel niresist D2B / 304 • Bush bearings: bronze / rubber • Shaft fully protected: AISI 420 • Wear Rings, spacer tubes for stage outer liner, tile cable protection, suction grid: AISI 304 stainless steel • Impellers and diffusers: Noryl

| Codes electric submergible pumps Ø 6” in inox and water engine | | | | | |
|---|---|---|---|---|---|
| Description | Type | HP | Kw | Code (eng.+ pump) | Code (only pump) |
| 6B series 50 ÷ 250 lt/m 698 ÷ 27 m.c.a. | 6B 030 N05/4• | 3,0 | 2,2 | PSSM1000 | PCPS500 |
| | 6B 030 N05/4• | | | PSST1000 | PCPS539 |
| | 6B 040 N06/4• | 4,0 | 3,0 | PSST1001 | PCPS501 |
| | 6B 040 N07/4• | | | PSST1002 | PCPS502 |
| | 6B 055 N08/4• | 5,5 | 4,0 | PSST1003 | PCPS503 |
| | 6B 055 N09/4• | | | PSST1004 | PCPS504 |
| | 6B 075 N12/4• | 7,5 | 5,5 | PSST1005 | PCPS505 |
| | 6B 075 N12 | | | PSST1100 | PCPS534 |
| | 6B 100 N15 | 10,0 | 7,5 | PSST1101 | PCPS506 |
| | 6B 125 N18 | 12,5 | 9,2 | PSST1102 | PCPS507 |
| | 6B 125 N21 | | | PSST1103 | PCPS508 |
| | 6B 150 N24 | 15,0 | 11,0 | PSST1104 | PCPS509 |
| | 6B 200 N30/SD | 20,0 | 15,0 | PSST1106 | PCPS511 |
| | 6B 250 N40/SD | 25,0 | 18,5 | PSST1107 | PCPS512 |
| | 6B 300 N45/SD | 30,0 | 22,0 | PSST1108 | PCPS513 |
| 6D series 120 ÷ 300 lt/m 599 ÷ 30 m.c.a. | 6D 030 N04/4• | 3,0 | 2,2 | PSSM1010 | PCPS520 |
| | 6D 030 N04/4• | | | PSST1010 | PCPS540 |
| | 6D 040 N05/4• | 4,0 | 3,0 | PSST1011 | PCPS521 |
| | 6D 055 N06/4• | 5,5 | 4,0 | PSST1012 | PCPS522 |
| | 6D 075 N07/4• | 7,5 | 5,5 | PSST1013 | PCPS523 |
| | 6D 075 N07 | | | PSST1110 | PCPS535 |
| | 6D 075 N08/4• | | | PSST1014 | PCPS524 |
| | 6D 075 N08 | | | PSST1111 | PCPS536 |
| | 6D 075 N09/4• | | | PSST1015 | PCPS525 |
| | 6D 075 N09 | | | PSST1112 | PCPS537 |
| | 6D 100 N12 | 10,0 | 7,5 | PSST1113 | PCPS526 |
| | 6D 125 N15 | 12,5 | 9,2 | PSST1114 | PCPS527 |
| | 6D 150 N18 | 15,0 | 11,0 | PSST1115 | PCPS528 |
| | 6D 175 N21 | 17,5 | 13,0 | PSST1116 | PCPS529 |
| | 6D 200 N24 | 20,0 | 15,0 | PSST1117 | PCPS530 |
| | 6D 250 N30 | 25,0 | 18,5 | PSST1118 | PCPS531 |
| | 6D 300 N35/SD | 30,0 | 22,0 | PSST1119 | PCPS532 |
| | 6D 400 N40/SD | 40,0 | 30,0 | PSST1120 | PCPS533 |

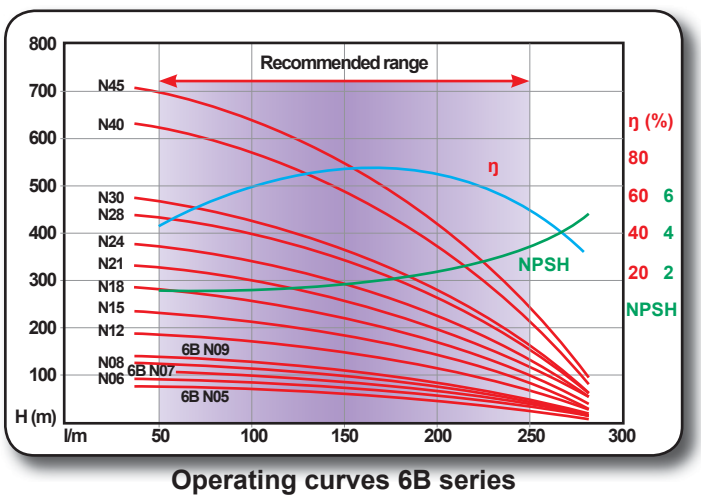
• **With engine Ø 4” in oil**

## 6B - 6D Series

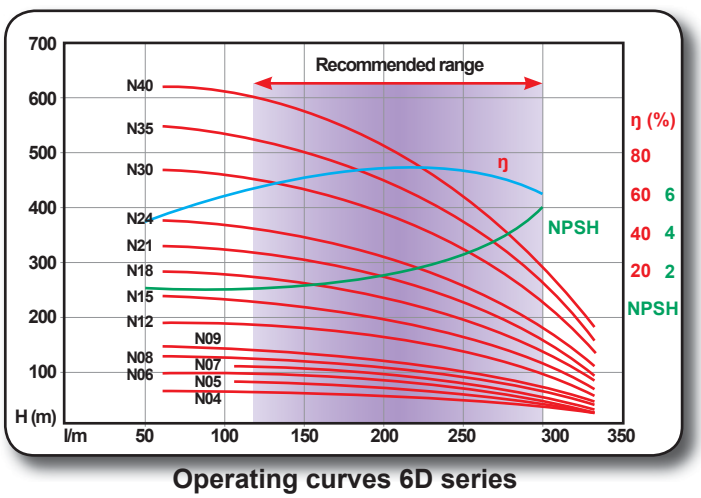
SUBMERSIBLE PUMPS 6” (2900 RPM - 50 Hz) - TOTAL MANOMETRIC HEADS IN METERS

| Type | Nom. pow. Hp | Nom. pow. Kw | Th. ph. 400 V A | FLOW l/m | 0 | 50 | 100 | 120 | 150 | 200 | 250 | 280 | 300 | Outlet Ø | Pump unit and motor Len. H mm | Pump unit and motor Weight kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | l/s | 0,0 | 0,8 | 1,7 | 2,0 | 2,5 | 3,3 | 4,2 | 4,7 | 5,0 | | | |
| | | | | m³/h | 0,0 | 3,0 | 6,0 | 7,2 | 9,0 | 12,0 | 15,0 | 16,8 | 18,0 | | | |
| 6B 030 N05 • | 3,0 | 2,2 | 5,8 | M.C.A. | 81 | 78 | 71 | 68 | 61 | 47 | 27 | | | | 834 | 21,9 |
| 6B 040 N06 • | 4,0 | 3,0 | 7,5 | | 98 | 93 | 86 | 82 | 74 | 56 | 32 | | | | 939 | 25,1 |
| 6B 040 N07 • | 4,0 | 3,0 | 7,5 | | 114 | 109 | 100 | 95 | 86 | 66 | 37 | | | | 977 | 25,7 |
| 6B 055 N08 • | 5,5 | 4,0 | 9,8 | | 130 | 124 | 114 | 109 | 98 | 75 | 43 | | | | 1.137 | 31,2 |
| 6B 055 N09 • | 5,5 | 4,0 | 9,8 | | 147 | 140 | 128 | 122 | 110 | 84 | 48 | | | | 1.213 | 32,8 |
| 6B 075 N12 • | 7,5 | 5,5 | 13,5 | | 196 | 186 | 171 | 163 | 147 | 113 | 64 | | | | 1.441 | 40,3 |
| 6B 100 N15 | 10,0 | 7,5 | 16,0 | | 244 | 233 | 214 | 204 | 184 | 141 | 80 | | | | 1.504 | 59,0 |
| 6B125 N18 | 12,5 | 9,2 | 19,0 | | 293 | 279 | 257 | 245 | 221 | 169 | 96 | | | | 1.651 | 63,7 |
| 6B 125 N21 | 12,5 | 9,2 | 20,0 | | 342 | 326 | 299 | 286 | 258 | 197 | 112 | | | | 1.765 | 65,7 |
| 6B 150 N24 | 15,0 | 11,0 | 23,0 | | 391 | 372 | 342 | 326 | 294 | 225 | 128 | | | | 1.911 | 69,9 |
| 6B 200 N30 SD | 20,0 | 15,0 | 31,0 | | 487 | 465 | 428 | 408 | 368 | 281 | 161 | | | | 2.389 | 84,9 |
| 6B 250 N40 SD | 25,0 | 18,5 | 38,0 | | 649 | 620 | 570 | 544 | 491 | 375 | 214 | | | | 2.825 | 97,0 |
| 6B 300 N45 SD | 30,0 | 22,0 | 45,0 | | 729 | 698 | 641 | 612 | 552 | 422 | 241 | | | | 3.081 | 107,5 |
| 6D 030 N04 • | 3,0 | 2,2 | 5,8 | | 62 | | | 60 | 57 | 51 | 42 | 35 | 30 | 3” | 796 | 21,2 |
| 6D 040 N05 • | 4,0 | 3,0 | 7,5 | | 78 | | | 77 | 72 | 64 | 53 | 44 | 37 | | 901 | 24,4 |
| 6D 055 N06 • | 5,5 | 4,0 | 9,8 | | 94 | | | 90 | 86 | 77 | 64 | 53 | 44 | | 1.061 | 29,9 |
| 6D 075 N07 • | 7,5 | 5,5 | 13,5 | | 109 | | | 105 | 100 | 89 | 74 | 62 | 52 | | 1.251 | 37,0 |
| 6D 075 N08 • | 7,5 | 5,5 | 13,5 | | 125 | | | 120 | 115 | 102 | 85 | 70 | 59 | | 1.289 | 37,7 |
| 6D 075 N09 • | 7,5 | 5,5 | 13,5 | | 140 | | | 135 | 129 | 115 | 95 | 79 | 67 | | 1.327 | 38,3 |
| 6D 100 N12 | 10,0 | 7,5 | 16,0 | | 187 | | | 180 | 172 | 153 | 127 | 106 | 89 | | 1.390 | 57,0 |
| 6D 125 N15 | 12,5 | 9,2 | 20,0 | | 234 | | | 225 | 215 | 192 | 159 | 132 | 111 | | 1.537 | 62,4 |
| 6D 150 N18 | 15,0 | 11,0 | 23,0 | | 281 | | | 269 | 258 | 230 | 191 | 158 | 133 | | 1.683 | 66,0 |
| 6D 175 N21 | 17,5 | 13,0 | 27,0 | | 328 | | | 314 | 301 | 268 | 223 | 185 | 155 | | 1.862 | 75,5 |
| 6D 200 N24 | 20,0 | 15,0 | 31,0 | | 374 | | | 359 | 344 | 307 | 254 | 211 | 178 | | 1.976 | 77,4 |
| 6D 250 N30 | 25,0 | 18,5 | 38,0 | | 468 | | | 449 | 431 | 383 | 318 | 264 | 222 | | 2.322 | 88,1 |
| 6D 300 N35 SD | 30,0 | 22,0 | 45,0 | | 546 | | | 524 | 502 | 447 | 371 | 308 | 259 | | 2.700 | 100,7 |
| 6D 400 N40 SD | 40,0 | 30,0 | 63,0 | | 624 | | | 599 | 574 | 511 | 424 | 352 | 296 | 2”½ | 3.020 | 120,0 |

• Electric motors coupled with a 4 “
- Variation permissible voltage at the terminals of the service equipment 5%.
- The capacities shown are for standard couplings.
- On request, can be used engines above.




Operating curves 6B series

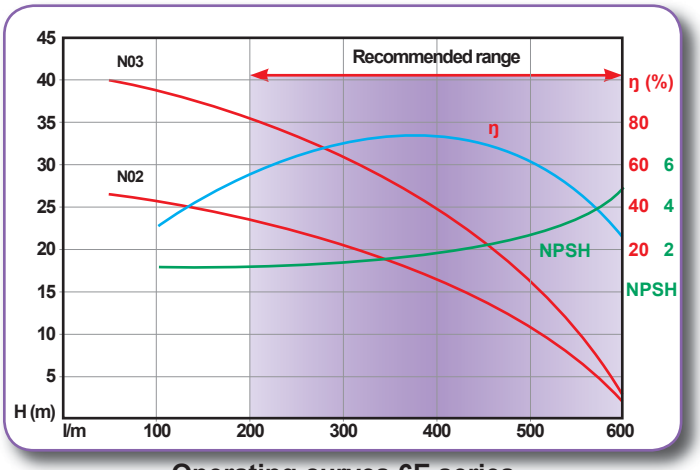



Operating curves 6D series

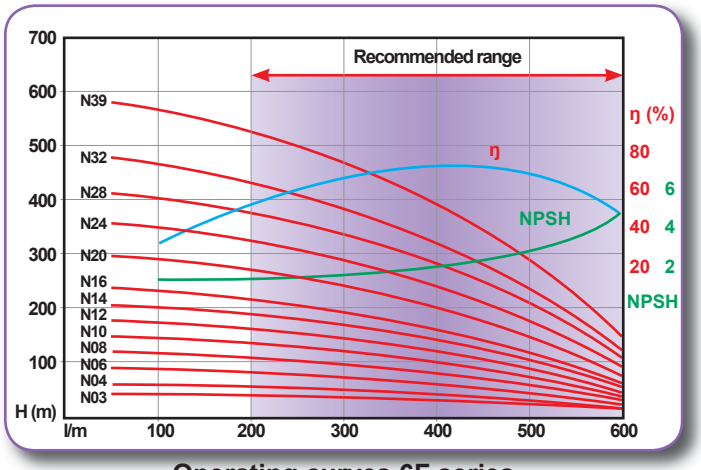
## 6E - 6F Series

| SUBMERSIBLE PUMPS 6” (2900 RPM - 50 HZ) - TOTAL MANOMETRIC HEADS IN METERS | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Nom. pow. | | Th. ph. 400 V | FLOW l/m | 0 | 200 | 250 | 280 | 300 | 400 | 500 | 600 | Outlet Ø | Pump unit and motor Len. H | Weight |
| | | | | l/s | 0,0 | 3,3 | 4,2 | 4,7 | 5,0 | 6,7 | 8,3 | 10,0 | | | |
| Type | Hp | Kw | A | $m^3/h$ | 0,0 | 12,0 | 15,0 | 16,8 | 18,0 | 24,0 | 30,0 | 36,0 | | mm | kg |
| 6E 020 N02• | 2,0 | 1,5 | 3,9 | M.C.A. | 28 | 25 | 23 | 22 | 21 | 17 | 10 | 2 | 3” | 758 | 20,4 |
| 6E 030 N03• | 3,0 | 2,2 | 5,8 | | 41 | 35 | 34 | 32 | 30 | 25 | 15 | 3 | | 919 | 25,8 |
| 6F 040 N03• | 4,0 | 3,0 | 7,5 | | 46 | 40 | 38 | 37 | 36 | 30 | 22 | 11 | | 882 | 23,8 |
| 6F 055 N04• | 5,5 | 4,0 | 9,8 | | 61 | 54 | 51 | 49 | 48 | 40 | 30 | 15 | | 1.061 | 29,5 |
| 6F 075 N06• | 7,5 | 5,5 | 9,8 | | 91 | 81 | 77 | 74 | 72 | 60 | 44 | 23 | | 1.327 | 37,7 |
| 6F 100 N08 | 10,0 | 7,5 | 16,0 | | 122 | 108 | 102 | 99 | 96 | 80 | 59 | 30 | | 1.390 | 56,2 |
| 6F 125 N10 | 12,5 | 9,2 | 20,0 | | 152 | 135 | 128 | 123 | 120 | 100 | 74 | 38 | | 1.537 | 60,7 |
| 6F 150 N12 | 15,0 | 11,0 | 23,0 | | 182 | 162 | 153 | 148 | 144 | 120 | 89 | 46 | | 1.683 | 64,8 |
| 6F 175 N14 | 17,5 | 13,0 | 27,0 | | 213 | 189 | 179 | 172 | 168 | 140 | 103 | 53 | | 1.862 | 74,1 |
| 6F 200 N16 | 20,0 | 15,0 | 31,0 | | 243 | 216 | 204 | 197 | 192 | 160 | 118 | 61 | | 1.976 | 75,8 |
| 6F 250 N20 | 25,0 | 18,5 | 38,0 | | 304 | 270 | 255 | 246 | 240 | 200 | 148 | 76 | | 2.322 | 86,1 |
| 6F 300 N24 | 30,0 | 22,0 | 45,0 | | 365 | 324 | 307 | 296 | 288 | 240 | 177 | 91 | | 2.615 | 96,5 |
| 6F 350 N28 SD | 35,0 | 26,0 | 54,0 | | 425 | 377 | 358 | 345 | 336 | 280 | 207 | 106 | | 3.096 | 118,5 |
| 6F 400 N32 SD | 40,0 | 30,0 | 61,0 | | 486 | 431 | 409 | 394 | 384 | 320 | 236 | 122 | | 3.324 | 122,1 |
| 6F 500 N39 SD | 50,0 | 37,0 | 73,0 | | 592 | 526 | 498 | 480 | 468 | 390 | 288 | 148 | | 4.195 | 160,7 |

• Electric motors coupled with a 4 “




Operating curves 6E series




Operating curves 6F series

| Description | Type | HP | Kw | Code (eng.+ pump) | Code (only pump) |
|---|---|---|---|---|---|
| 6E series 200 ÷ 600 l/m 35 ÷ 2 m.c.a. | 6E 020 N02/4• | 2,0 | 1,5 | PSSM1020 | PCPS546 |
| | 6E 020 N02/4• | | | PSST1020 | PCPS546 |
| | 6E 030 N0¾• | 3,0 | 2,2 | PSSM1021 | PCPS547 |
| | 6E 030 N0¾• | | | PSST1021 | PCPS547 |
| 6F series 200 ÷ 600 l/m 593 ÷ 11 m.c.a. | 6F 040 N0¾• | 4,0 | 3,0 | PSST1030 | PCPS550 |
| | 6F 055 N04/4• | 5,5 | 4,0 | PSST1031 | PCPS551 |
| | 6F 075 N06/4• | 7,5 | 5,5 | PSST1032 | PCPS552 |
| | 6F 075 N06 | | | PSST1125 | PCPS552 |
| | 6F 100 N08 | 10,0 | 7,5 | PSST1126 | PCPS553 |
| | 6F 125 N10 | 12,5 | 9,2 | PSST1127 | PCPS554 |
| | 6F 150 N12 | 15,0 | 11,0 | PSST1128 | PCPS555 |
| | 6F 175 N14 | 17,5 | 13,0 | PSST1129 | PCPS556 |
| | 6F 200 N16 | 20,0 | 15,0 | PSST1130 | PCPS557 |
| | 6F 250 N20 | 25,0 | 18,5 | PSST1131 | PCPS558 |
| | 6F 300 N24 | 30,0 | 22,0 | PSST1132 | PCPS559 |
| | 6F 350 N28/SD | 35,0 | 26,0 | PSST1133 | PCPS560 |
| | 6F 400 N32/SD | 40,0 | 30,0 | PSST1134 | PCPS561 |
| | 6F 500 N40/SD | 50,0 | 37,0 | PSST1135 | PCPS562 |

• **With engine Ø 4” in oil**

## 6H - 6I - 6L Series

SUBMERSIBLE PUMPS 6” (2900 RPM - 50 Hz) - TOTAL MANOMETRIC HEADS IN METERS

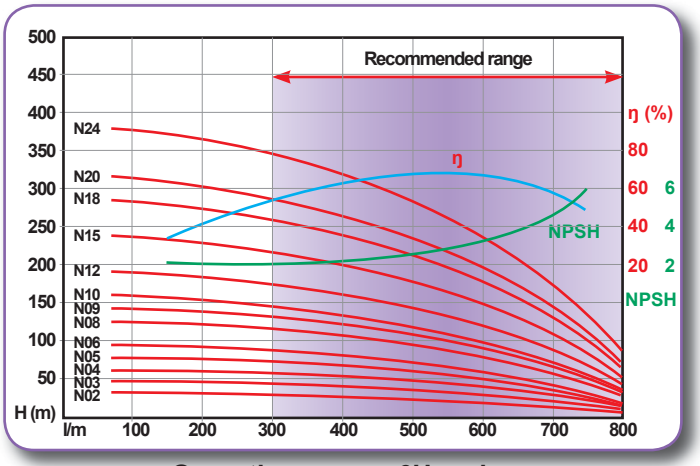
| Type | Nom. pow. Hp | Nom. pow. Kw | Th. ph. 400 V A | FLOW l/m | 0 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1.000 | 1.100 | Outlet Ø | Pump unit and motor Len. H mm | Pump unit and motor Weight kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | l/s | 0,0 | 5,0 | 6,7 | 8,3 | 10,0 | 11,7 | 13,3 | 15,0 | 16,7 | 18,3 | | | |
| | | | | m³/h | 0,0 | 18,0 | 24,0 | 30,0 | 36,0 | 42,0 | 48,0 | 54,0 | 60,0 | 66,0 | | | |
| 6H 040 N02• | 4,0 | 3,0 | 7,5 | M.C.A. | 31 | 29 | 26 | 24 | 20 | 15 | 7 | | | | 3” | 831 | 22,9 |
| 6H 055 N03• | 5,5 | 4,0 | 9,8 | | 48 | 43 | 40 | 35 | 30 | 22 | 11 | | | | | 1.051 | 29,6 |
| 6H 075 N04• | 7,5 | 5,5 | 13,5 | | 63 | 57 | 53 | 47 | 40 | 29 | 14 | | | | | 1.225 | 36,0 |
| 6H 100 N05 | 10,0 | 7,5 | 16,0 | | 78 | 72 | 66 | 59 | 50 | 36 | 18 | | | | | 1.234 | 53,6 |
| 6H 125 N06 | 12,5 | 9,2 | 20,0 | | 94 | 86 | 79 | 71 | 59 | 44 | 22 | | | | | 1.327 | 57,1 |
| 6H 150 N08 | 15,0 | 11,0 | 23,0 | | 126 | 114 | 106 | 94 | 79 | 58 | 29 | | | | | 1.479 | 61,2 |
| 6H 175 N09 | 17,5 | 13,0 | 27,0 | | 141 | 129 | 119 | 106 | 89 | 65 | 32 | | | | | 1.604 | 69,6 |
| 6H 200 N10 | 20,0 | 15,0 | 31,0 | | 157 | 143 | 132 | 118 | 99 | 73 | 36 | | | | | 1.666 | 70,5 |
| 6H 250 N12 | 25,0 | 18,5 | 38,0 | | 188 | 172 | 158 | 142 | 119 | 87 | 43 | | | | | 1.850 | 77,8 |
| 6H 300 N15 | 30,0 | 22,0 | 45,0 | | 235 | 215 | 198 | 177 | 149 | 109 | 54 | | | | | 2.095 | 87,3 |
| 6H 350 N18 | 35,0 | 26,0 | 54,0 | | 283 | 257 | 238 | 212 | 178 | 131 | 65 | | | | | 2.457 | 107,3 |
| 6H 400 N20 | 40,0 | 30,0 | 61,0 | | 314 | 286 | 264 | 236 | 198 | 145 | 72 | | | | | 3.571 | 109,1 |
| 6H 500 N24 S | 50,0 | 37,0 | 73,0 | | 376 | 343 | 317 | 283 | 238 | 174 | 86 | | | | | 3.309 | 142,7 |
| 6I 030 N02• | 3,0 | 2,2 | 5,8 | | 21 | | 16 | 14 | 12 | 10 | 8 | 5 | | | | 868 | 24,9 |
| 6L 055 N02• | 5,5 | 4,0 | 9,8 | | 26 | | | 21 | 19 | 17 | 14 | 11 | 8 | 4 | | 953 | 27,7 |
| 6L 075 N03• | 7,5 | 5,5 | 13,5 | | 40 | | | 32 | 29 | 26 | 22 | 17 | 12 | 6 | | 1.165 | 35,1 |
| 6L 100 N04 | 10,0 | 7,5 | 15,0 | | 52 | | | 42 | 38 | 34 | 29 | 23 | 16 | 8 | | 1.174 | 52,7 |
| 6L 125 N05 | 12,5 | 9,2 | 18,0 | | 65 | | | 53 | 48 | 43 | 36 | 29 | 20 | 10 | | 1.267 | 56,3 |
| 6L 150 N06 | 15,0 | 11,0 | 21,0 | | 78 | | | 63 | 58 | 51 | 43 | 34 | 24 | 12 | | 1.359 | 59,4 |
| 6L 175 N08 | 17,5 | 13,0 | 27,0 | | 104 | | | 84 | 77 | 68 | 58 | 46 | 32 | 16 | | 1.544 | 68,7 |
| 6L 200 N09 | 20,0 | 15,0 | 31,0 | | 118 | | | 95 | 86 | 77 | 65 | 51 | 36 | 18 | | 1.604 | 69,6 |
| 6L 250 N10 | 25,0 | 18,5 | 34,0 | | 131 | | | 106 | 96 | 85 | 72 | 57 | 40 | 20 | | 1.730 | 76,0 |
| 6L 300 N12 | 30,0 | 22,0 | 40,0 | | 158 | | | 127 | 115 | 102 | 86 | 68 | 48 | 24 | | 1.915 | 84,6 |
| 6L 350 N15 | 35,0 | 26,0 | 54,0 | | 197 | | | 158 | 144 | 128 | 108 | 86 | 60 | 30 | | 2.225 | 103,5 |
| 6L 400 N18 | 40,0 | 30,0 | 61,0 | | 236 | | | 190 | 173 | 153 | 130 | 103 | 72 | 36 | | 2.457 | 107,3 |
| 6L 500 N22 S | 50,0 | 37,0 | 73,0 | | 284 | | | 232 | 211 | 187 | 158 | 125 | 88 | 44 | | 3.065 | 140,9 |

• Coupled with electric motors 4 “”

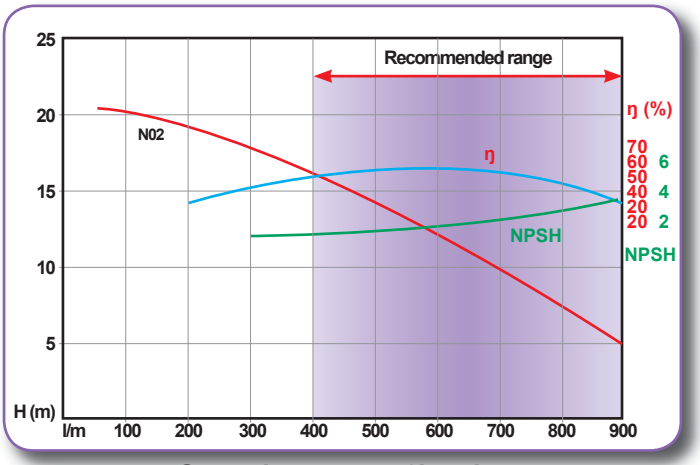
Variation permissible voltage at the terminals of the equipment control 5% ● The capacities shown are for standard couplings ● On request, motors can be used to power higher.

| Description | Type | HP | Kw | Code (eng.+ pump) | Code (only pump) |
|---|---|---|---|---|---|
| 6H series 300 ÷ 800 l/m 400 ÷ 7 m.c.a. | 6H 040 N02/4• | 4,0 | 3,0 | PSST1040 | PCPS569 |
| | 6H 055 N0¾• | 5,5 | 4,0 | PSST1041 | PCPS570 |
| | 6H 075 N04/4• | 7,5 | 5,5 | PSST1042 | PCPS571 |
| | 6H 075 N04 | | | PSST1140 | PCPS572 |
| | 6H 100 N05 | 10,0 | 7,5 | PSST1141 | PCPS573 |
| | 6H 125 N06 | 12,5 | 9,2 | PSST1142 | PCPS574 |
| | 6H 150 N08 | 15,0 | 11,0 | PSST1143 | PCPS575 |
| | 6H 175 N09 | 17,5 | 13,0 | PSST1144 | PCPS576 |
| | 6H 200 N10 | 20,0 | 15,0 | PSST1145 | PCPS577 |
| | 6H 250 N12 | 25,0 | 18,5 | PSST1146 | PCPS578 |
| | 6H 300 N15 | 30,0 | 22,0 | PSST1147 | PCPS579 |
| | 6H 350 N18 | 35,0 | 26,0 | PSST1148 | PCPS580 |
| | 6H 400 N20 | 40,0 | 30,0 | PSST1149 | PCPS581 |
| | 6H 500 N24/S | 50,0 | 37,0 | PSST1150 | PCPS582 |
| 6I series 400 ÷ 900 l/m 16 ÷ 5 m.c.a. | 6I 030 N02/4• | 3,0 | 2,2 | PSSM1030 | PCPS590 |
| | 6I 030 N02/4• | 3,0 | 2,2 | PSST1050 | PCPS590 |
| Serie 6L 500 ÷ 1.100 l/m 232 ÷ 4 m.c.a. | 6L 055 N02/4• | 5,5 | 4,0 | PSST1060 | PCPS599 |
| | 6L 075 N0¾• | 7,5 | 5,5 | PSST1061 | PCPS600 |
| | 6L 075 N03 | 7,5 | 5,5 | PSST1160 | PCPS600 |
| | 6L 100 N04 | 10,0 | 7,5 | PSST1161 | PCPS602 |
| | 6L 125 N05 | 12,5 | 9,2 | PSST1162 | PCPS605 |
| | 6L 150 N06 | 15,0 | 11,0 | PSST1163 | PCPS603 |
| | 6L 175 N08 | 17,5 | 13,0 | PSST1164 | PCPS609 |
| | 6L 200 N09 | 20,0 | 15,0 | PSST1165 | PCPS606 |
| | 6L 250 N10 | 25,0 | 18,5 | PSST1166 | PCPS607 |
| | 6L 300 N12 | 30,0 | 22,0 | PSST1167 | PCPS608 |
| | 6L 350 N15 | 35,0 | 26,0 | PSST1168 | PCPS610 |
| | 6L 400 N18 | 40,0 | 30,0 | PSST1169 | PCPS611 |
| | 6L 500 N22/S | 50,0 | 37,0 | PSST1170 | PCPS612 |

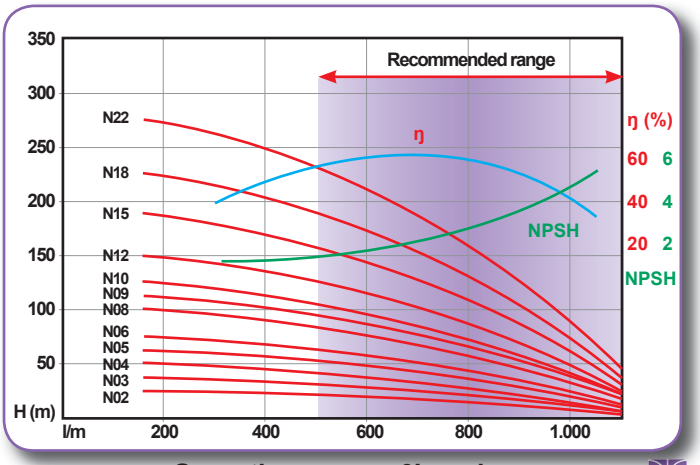
• **With engine Ø 4” in oil**




**Operating curves 6H series**




**Operating curves 6I series**




**Operating curves 6L series**

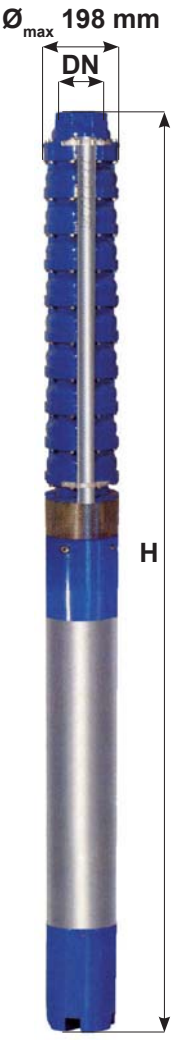
## ► SUBMERSIBLE PUMPS SEMI AXIAL

The semi-axial submersible pumps are characterized by stages formed by the body with the built-in diffuser and impeller semiaxial. This type of solution, with respect to the radial, is ideal when they are required, equal to the diameter, medium to high flow rates with medium head.
**MATERIALS**: impeller, diffuser and suction **cast iron G25** • Check valve built.

## SEMI AXIAL SUBMERSIBLE Ø 6” 14 SEC SERIES

SUBMERSIBLE PUMPS **14 SEC 60** - TOTAL MANOMETRIC HEADS IN METERS

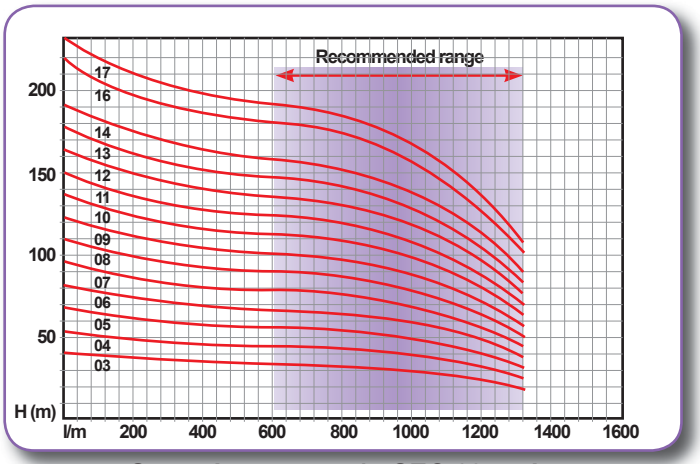
| Type | Code | Nom. pow. kW | Nom. pow. HP | V 400 A | | FLOW l/min | 0 | 600 | 720 | 840 | 960 | 1.080 | 1.200 | 1.320 | Outlet | Pump unit and motor Len. H mm | Weight Kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | l/sec | 0,0 | 10,0 | 12,0 | 14,0 | 16,0 | 18,0 | 20,0 | 22,0 | | | |
| | | | | | | m³/h | 0,0 | 36,0 | 43,2 | 50,4 | 57,6 | 64,8 | 72,0 | 79,2 | | | |
| 14 SEC 60/03 | PSSTG100 | 7,5 | 10,0 | 17,5 | M.C.A. | | 41 | 34 | 33 | 32 | 30 | 28 | 24 | 19 | DN 3” GAS | 1.313 | 29 |
| 14 SEC 60/04 | PSSTG101 | 9,2 | 12,5 | 21,0 | | | 55 | 45 | 44 | 43 | 40 | 37 | 32 | 25 | | 1.462 | 34 |
| 14 SEC 60/05 | PSSTG102 | 11,0 | 15,0 | 24,5 | | | 68 | 57 | 55 | 53 | 50 | 47 | 40 | 32 | | 1.621 | 39 |
| 14 SEC 60/06 | PSSTG103 | 13,0 | 17,5 | 28,0 | | | 82 | 68 | 66 | 64 | 60 | 56 | 48 | 38 | | 1.750 | 44 |
| 14 SEC 60/07 | PSSTG104 | 15,0 | 20,0 | 32,0 | | | 96 | 79 | 77 | 75 | 70 | 65 | 56 | 44 | | 1.939 | 49 |
| 14 SEC 60/08 | PSSTG105 | 18,5 | 25,0 | 40,0 | | | 109 | 91 | 88 | 85 | 80 | 75 | 64 | 51 | | 2.098 | 54 |
| 14 SEC 60/09 | PSSTG106 | 18,5 | 25,0 | 40,0 | | | 123 | 102 | 99 | 96 | 90 | 84 | 72 | 57 | | 2.197 | 59 |
| 14 SEC 60/10 | PSSTG107 | 22,0 | 30,0 | 47,5 | | | 137 | 113 | 110 | 107 | 100 | 93 | 80 | 63 | | 2.376 | 64 |
| 14 SEC 60/11 | PSSTG108 | 22,0 | 30,0 | 47,5 | | | 150 | 125 | 121 | 117 | 110 | 103 | 88 | 70 | | 2.475 | 69 |
| 14 SEC 60/12 | PSSTG109 | 26,0 | 35,0 | 55,0 | | | 164 | 136 | 132 | 128 | 120 | 112 | 96 | 76 | | 2.684 | 74 |
| 14 SEC 60/14 | PSSTG110 | 30,0 | 40,0 | 62,5 | | | 191 | 159 | 154 | 149 | 140 | 131 | 112 | 89 | | 2.952 | 84 |
| 14 SEC 60/17 | PSSTG111 | 37,0 | 50,0 | 78,0 | | | 232 | 193 | 187 | 181 | 170 | 159 | 136 | 108 | | 3.339 | 99 |



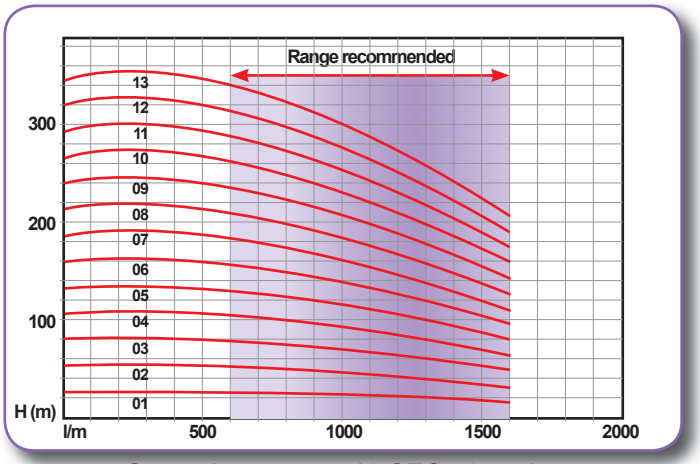

## SEMIAXIAL SUBMERSIBLE Ø 8” PUMP 18 SEC SERIES

SUBMERSIBLE PUMPS **18 SEC 70** - TOTAL MANOMETRIC HEADS IN METERS

| Type | Code | Nom. pow. kW | Nom. pow. HP | V 400 A | | FLOW l/min | 0 | 600 | 800 | 1.000 | 1.200 | 1.400 | 1.600 | Outlet | Group pump and engine Len. H mm | Wei. Kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | l/sec | 0,0 | 10,0 | 13,3 | 16,7 | 20,0 | 23,3 | 26,7 | | | |
| | | | | | | m³/h | 0,0 | 36,0 | 48,0 | 60,0 | 72,0 | 84,0 | 96,0 | | | |
| 18 SEC 70/02 | PSSTG400 | 11,0 | 15,0 | 24,5 | M.C.A. | | 53 | 52 | 50 | 46 | 42 | 36 | 32 | DN 5” GAS | 1.434 | 51 |
| 18 SEC 70/03 | PSSTG401 | 18,5 | 25,0 | 40,0 | | | 80 | 78 | 75 | 69 | 63 | 54 | 48 | | 1.738 | 64 |
| 18 SEC 70/04 | PSSTG402 | 22,0 | 30,0 | 47,0 | | | 106 | 104 | 100 | 92 | 84 | 72 | 64 | | 1.942 | 77 |
| 18 SEC 70/05 | PSSTG403 | 30,0 | 40,0 | 62,5 | | | 133 | 130 | 125 | 115 | 105 | 90 | 80 | | 2.246 | 90 |
| 18 SEC 70/06 | PSSTG404 | 37,0 | 50,0 | 78,0 | | | 159 | 156 | 150 | 138 | 126 | 108 | 96 | | 2.460 | 103 |
| 18 SEC 70/07 | PSSTG405 | 37,0 | 50,0 | 78,0 | | | 186 | 182 | 175 | 161 | 147 | 126 | 112 | | 2.584 | 116 |
| 18 SEC 70/08 | PSSTG406 | 44,0 | 60,0 | 92,0 | | | 212 | 208 | 200 | 184 | 168 | 144 | 128 | | 2.677 | 129 |
| 18 SEC 70/09 | PSSTG407 | 55,0 | 75,0 | 113,5 | | | 239 | 234 | 225 | 207 | 189 | 162 | 144 | | 2.951 | 142 |
| 18 SEC 70/10 | PSSTG408 | 55,0 | 75,0 | 113,5 | | | 265 | 260 | 250 | 230 | 210 | 180 | 160 | | 3.075 | 155 |
| 18 SEC 70/11 | PSSTG409 | 66,0 | 90,0 | 134,5 | | | 292 | 286 | 275 | 253 | 231 | 198 | 176 | | 3.349 | 168 |
| 18 SEC 70/12 | PSSTG410 | 66,0 | 90,0 | 134,5 | | | 318 | 312 | 300 | 276 | 252 | 216 | 192 | | 3.473 | 181 |
| 18 SEC 70/13 | PSSTG411 | 75,0 | 100,0 | 149,5 | | | 345 | 338 | 325 | 299 | 273 | 234 | 208 | | 3.697 | 194 |




Operating curves 14 SEC 60 series




Operating curves 18 SEC 70 series

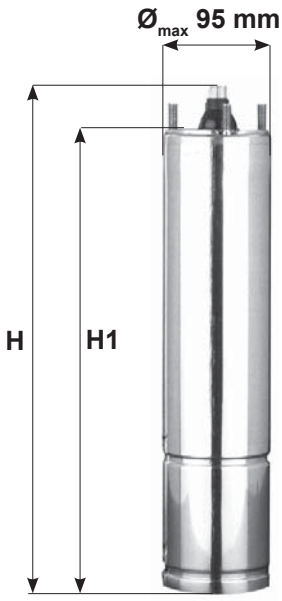
## ► MOTORS FOR SUBMERSIBLE PUMPS

# OIL MOTORS LUBRIFICATION Ø “4

**SPECIFICATIONS:** 4 “Retractable type submersible motor, NEMA Standard ● Removable cable connector ● Stator can be easily removed from the shirt for rapid rewind ● Engines 50 HZ: 1 Service Factor (SF = 1) ● 60 Hz motors: Service Factor NEMA Standard

**4” SINGLE PHASE MOTOR – OIL**

| Type | Code | Hp | Kw | A | Starter | RPM | Perform. EFF. | Condenser µF | H mm | H1 mm | Weight Kg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| S4 MOM 005 | PMTM030 | 0,50 | 0,37 | 3,5 | 9 | 2.800 | 51 | 16 | 363 | 325 | 6,5 |
| S4 MOM 007 | PMTM031 | 0,75 | 0,56 | 4,5 | 12 | | 58 | 20 | 383 | 345 | 7,5 |
| S4 MOM 010 | PMTM032 | 1,00 | 0,75 | 6,3 | 20 | 2.820 | 59 | 25 | 413 | 375 | 8,7 |
| S4 MOM 015 | PMTM033 | 1,50 | 1,10 | 8,5 | 25 | 2.800 | 62 | 35 | 433 | 395 | 9,6 |
| S4 MOM 020 | PMTM034 | 2,00 | 1,50 | 10,8 | 35 | | 69 | 40 | 478 | 440 | 11,5 |
| S4 MOM 030 | PMTM035 | 3,00 | 2,20 | 14,0 | 45 | | 78 | 60 | 596 | 558 | 15,8 |




**4” THREE PHASE MOTOR – OIL**

| Type | Code | Hp | Kw | A | Starter | RPM | Perform. EFF. | H mm | H1 mm | Weight Kg |
|---|---|---|---|---|---|---|---|---|---|---|
| S4 MOT 005 | PMTT030 | 0,50 | 0,37 | 1,6 | 5,2 | 2.820 | 53 | 363 | 325 | 6,5 |
| S4 MOT 007 | PMTT031 | 0,75 | 0,56 | 2,2 | 7,5 | | 56 | | | |
| S4 MOT 010 | PMTT032 | 1,00 | 0,75 | 2,6 | 10,0 | | 62 | 383 | 345 | 7,5 |
| S4 MOT 015 | PMTT033 | 1,50 | 1,10 | 3,6 | 16,0 | 2.830 | 65 | 413 | 375 | 8,7 |
| S4 MOT 020 | PMTT034 | 2,00 | 1,50 | 4,6 | 20,0 | 2.810 | 69 | 433 | 395 | 9,6 |
| S4 MOT 030 | PMTT035 | 3,00 | 2,20 | 6,3 | 33,0 | | 72 | 536 | 498 | 11,5 |
| S4 MOT 040 | PMTT036 | 4,00 | 3,00 | 7,9 | 45,0 | 2.840 | 75 | 596 | 558 | 17,6 |
| S4 MOT 055 | PMTT037 | 5,50 | 4,00 | 10,2 | 55,0 | 2.850 | 76 | 666 | 628 | 23,0 |
| S4 MOT 075 | PMTT038 | 7,50 | 5,50 | 13,1 | 70,0 | | 80 | 736 | 698 | 26,6 |
| S4 MOT 100 | PMTT039 | 10,00 | 7,50 | 16,9 | 84,0 | 2.840 | 81 | 816 | 778 | 30,6 |

## ► SCM SERIES PUMPS MOTOR

| STANDARD EQUIPMENT PUMP SCM SERIES | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Group type | | Code | Model engine | Cylinders | Displacement L | Suction | Continuous power at rpm | | | | | | | | average consumption g/cvh |
| | | | | | | | 1.750 | | 2.000 | | 2.200 | | 2.500 | | |
| | | | | | | | kW | hp | kW | hp | kW | hp | kW | hp | |
| SCM085 | 30/OR | GMP016 | F32MNS | 4 | 3,2 | natural | 49 | 67 | 54 | 73 | 58 | 78 | 61 | 83 | 189 |
| SCM090 | | GMP010 | NEF45MSAD | | 4,5 | | 50 | 68 | 52 | 71 | 54 | 73 | 60 | 82 | 170 |
| SCM110 | 10/OR | GMP001 | NEF45MSSA | | | turbo | 61 | 83 | 63 | 86 | 66 | 90 | 74 | 101 | 165 |
| | 30/OR | GMP012 | | | | | | | | | | | | | |
| | 30/FL | GMP013 | | | | | | | | | | | | | |
| | 60/OR | GMP014 | | | | | | | | | | | | | |
| SCM120 | 10/OR | GMP017 | NEF67MSA | 6 | 6,7 | natural | 65 | 88 | 69 | 94 | 71 | 97 | 81 | 110 | 166 |
| | 40/OR | GMP018 | | | | | | | | | | | | | |
| SCM160 | 10/OR | GMP021 | NEF45MSTD20 | 4 | 4,5 | turbo | 75 | 102 | 81 | 110 | 83 | 113 | 94 | 128 | 159 |
| SCM200 | 10/OR | GMP022 | NEF67MST23 | 6 | 6,7 | | 96 | 130 | 103 | 140 | 106 | 144 | 120 | 163 | 156 |
| | 20/OR | GMP023 | | | | | | | | | | | | | |
| | 20/FL | GMP024 | | | | | | | | | | | | | |
| SCM220 | 05/OR | GMP025 | NEF67MSTD20 | | | | 109 | 148 | 115 | 156 | 116 | 158 | 129 | 175 | 154 |
| SCM250 | 10/OR | GMP026 | NEF60ENTD | | 5,9 | | 132 | 180 | 145 | 198 | 151 | 206 | 169 | 230 | 156 |
| | 30/OR | GMP027 | | | | | | | | | | | | | |
| | 30/FL | GMP028 | | | | | | | | | | | | | |

IVECO engine complete with manual throttle and muffler

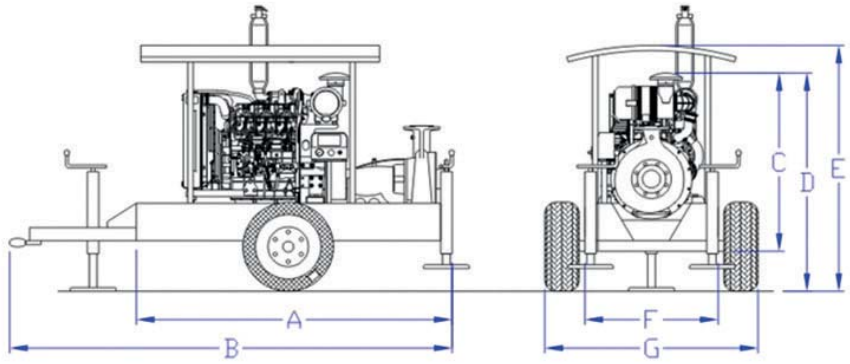
Control unit for motor protection type Elkosh Cem 250, complete with tachometer, meter, pressure gauge, pressure switch, timer, key start, warning lights for alarm signaling; stops the engine for low oil pressure, high engine temperature, break belts, pressure drop idrSCMa

Frame with two rubber wheels of large diameter complete with: built-in tank, 3 support legs, adjustable steering in height, for documents / objects, visual player of fuel, battery for starting

Joint elastSCMo for coupling the motor and pump.

Caprari pump (model see table below)

| CAPRARI PUMPS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Type | | RPM | Pump | No. impellers | Inlet | Outlet | Coupling | Flow l/min | |
| | | | | | | | | Heads m | |
| SCM085 | 30/OR | 2.000 | MEC AZH4/100A | 1 | DN125 | DN100 | HORIZONTAL | 2.700 | 2.400 | 2.100 |
| | | | | | | | | 69 | 70 | 71 |
| SCM090 | | | | | | | | 2.700 | 2.400 | 2.100 |
| | | | | | | | | 69 | 70 | 71 |
| SCM110 | 10/OR | | MEC A3/125B | | DN150 | DN125 | | 4.800 | 3.600 | 3.000 |
| | | | | | | | | 61 | 65 | 66 |
| | 30/OR | | MEC MR100/2H | 2 | DN125 | DN100 | | 2.700 | 2.400 | 2.160 |
| | | | | | | | | 105 | 109 | 112 |
| | 30/FL | | MEC MG100/2H | | | | FLANGE | 2.700 | 2.400 | 2.160 |
| | | | | | | | | 105 | 109 | 112 |
| | 60/OR | | MEC MR 80-1/3A | 3 | DN80 | DN80 | HORIZONTAL | 1.600 | 1.320 | 1.080 |
| | | | | | | | | 152 | 164 | 170 |
| SCM120 | 10/OR | | MEC A3/125B | 1 | DN150 | DN125 | | 4.800 | 3.600 | 3.000 |
| | | | | | | | | 61 | 65 | 66 |
| | 40/OR | | MEC MR80.4/3B | 3 | DN100 | DN80 | | 2.400 | 1.700 | 1.200 |
| | | | | | | | | 110 | 135 | 148 |
| SCM160 | 10/OR | | MEC AZRBH4/125C | 1 | DN150 | DN125 | | 4.200 | 3.600 | 3.000 |
| | | | | | | | | 88 | 91 | 92 |
| SCM200 | | 1.750 | MEC MR 125/2E | 2 | | | | 4.800 | 4.200 | 3.600 |
| | | | | | | | | 87 | 95 | 102 |
| | 20/OR | | MEC MR 100/2A | | DN125 | DN100 | | 3.240 | 3.000 | 2.520 |
| | | | | | | | | 123 | 127 | 132 |
| | 20/FL | | MEC MG 100/2A | | | | FLANGE | 3.240 | 3.000 | 2.520 |
| | | | | | | | | 123 | 127 | 132 |
| SCM220 | 05/OR | 2.000 | MEC AZRBH4/125A | 1 | DN150 | DN125 | HORIZONTAL | 4.200 | 3.600 | 3.000 |
| | | | | | | | | 111 | 114 | 115 |
| SCM250 | 10/OR | 1.750 | MEC MR 125/2E | 2 | | | | 4.200 | 3.900 | 3.600 |
| | | | | | | | | 114 | 117 | 119 |
| | 30/OR | | MEC MR 100-2/3D | 3 | DN125 | DN100 | | 3.480 | 3.000 | 2.520 |
| | | | | | | | | 137 | 150 | 159 |
| | 30/FL | | MEC MG100-2/3D | | | | FLANGE | 3.480 | 3.000 | 2.520 |
| | | | | | | | | 127 | 150 | 159 |




| WEIGHTS AND DIMENSIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Type | Tank liters | A mm | B mm | C mm | D mm | E mm | F mm | G mm | Weight cleaning kg. |
| SCM085 | 120 | 2.300 | 3.100 | 1.160 | 1.370 | 1.570 | 800 | 1.280 | 680 ÷ 800 |
| SCM090 | | | | | | | | | |
| SCM110 | 330 | 2.700 | 3.800 | 1.300 | 1.600 | 1.730 | 1.000 | 1.480 | 1.000 ÷ 1.150 |
| SCM120 | | | | | | | | | |
| SCM160 | | | | | | | | | |
| SCM200 | | | | | | | | | |
| SCM220 | | | | | | | | | |
| SCM250 | | | | | | | | | 1.300 |

## ► MEMBRANE AUTOCLAVE

**FEATURES OF USE**

Our autoclaves interchangeable membrane are ideal for any modern installation, applicable on any type of pump and suitable for food use.

- Increased water yield. The useful capacity of the autoclave membrane is far superior to that of standard tanks. Therefore, the lower footprint at the same efficiency of water.
- Remove the compressor. The air handler is no longer needed in as a bearing of nitrogen, which is separated from the water by the membrane rubber, constantly maintains pressure in the autoclave.
- Exemption ISPESL factory. No disturbance to submit the autoclave to ISPESL. The autoclave, the safety valve and the pressure gauge supplied together already tested and exempted from the factory.
- Use with difficult waters. Possibility of using the autoclave membrane also with calcareous water or in the presence of stray currents, being the water in contact only with the membrane.
- No maintenance. Economy in installation and rapid assembly. You do not need any maintenance or adjustment.
- Duration virtually unlimited. The insurance covers the maximum length of the membrane since the same can neither bend nor rubbing the sheet because it is fixed to the fitting at the top and bottom of the flange. Thus, duration almost unlimited autoclave being replaceable membrane..

**TECHNICAL SPECIFICATIONS**

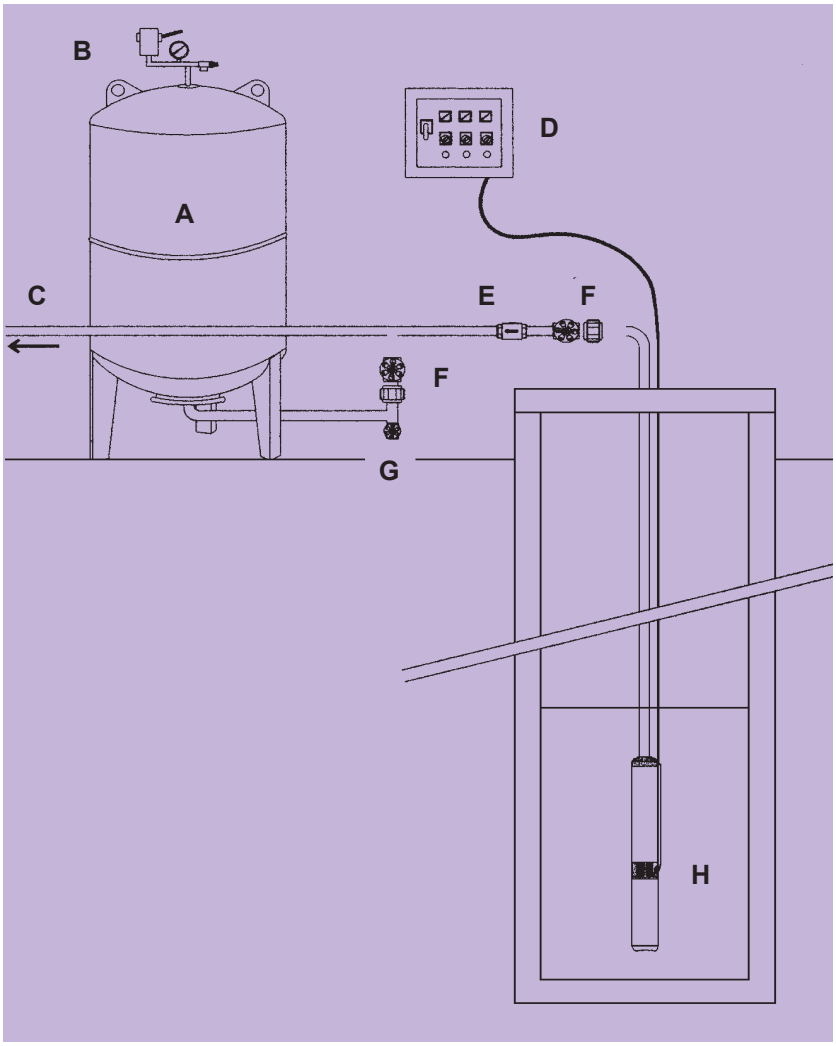
- Diaphragm: Butyl
- Maximum temperature: 99 °
- Paint: epoxy powder - blue or red
- Testing: dismissed at the factory - CE (excluding mod.: 24 liters)
- Mod. S - 24 SP: with flange and replaceable membrane
- Mod. S - 24 BP: threaded and non-interchangeable membrane

On request we also provide models for export market

| AUTOCLAVE ZILMET SERIES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Diameter | Height | | | |
| Type | Code | Location | Capacity lt | mm | | Connection | Pressure max bar | Pre-charge bar |
| SZ - 24 SP | FID060 | Vertical | 24 | 362 | 281 | 1" | 10 | 1,5 |
| SZ - 60 VERT | PAT158 | | 60 | 380 | 850 | | | |
| SZ - 100 VERT | PAT160 | | 100 | 450 | 935 | | | |
| SZ - 200 VERT | PAT161 | | 200 | 550 | 1.253 | 1"½ | | |
| SZ - 300 VERT | PAT162 | | 300 | 630 | 1.370 | | | |
| SZ - 500 VERT | PAT164 | | 500 | 750 | 1.600 | | | |
| SZ - 750 VERT | PAT165 | | 750 | | 2.140 | | 8 | |
| SZ - 60 HOR | PAT200 | Horizontal | 60 | 380 | 410 | 1" | 10 | |
| SZ - 100 HOR | PAT201 | | 100 | 450 | 480 | | | |
| SZ - 200 HOR | PAT202 | | 200 | 550 | 580 | 1"½ | | |
| SZ - 300 HOR | PAT300 | | 300 | 630 | 660 | | | |
| | PAC052 | Security KIT valve and manometer not included (to buy separately) | | | | | | |

**SIZING**
**AND INSTALLATION AUTOCLAVE**
**LEGEND**

- **A** (Autoclave interchangeable membrane
- **B** (Group: Pressure - Pressure Gauge - safety valve)
- **C** (system - water mains)
- **D** (Electric control panel)
- **E** (non-return valve)
- **F** (Group isolating gate valve filler)
- **G** (gate valve exhaust)
- **H** (Well or supply tank with submersible pump).




**INDICATIONS FOR THE AUTOCLAVE CHOICE**

To avoid an excessive number of starts of the pump have to calculate the minimum reserve of water contained autoclave, obtainable from the formula set out below:

**$Vu = ((A_{max} \times c)/4) \times (Pf+1)/(Pf-Pi)$**

where:

- **Vu** = Water reserve the autoclave
- **$A_{max}$** = Maximum power consumption of the system
- **c** = Multiplier to pump more than 2 Hp:
  = 1.5 for pumps from 2.5 to 4 Hp
  = 2.5 for pumps 5 to 8 Hp
  = 3.5 for pumps 9 to 12 Hp
- **Pf** = Maximum pressure of the pressure switch
- **Pi** = Minimum pressure of the pressure switch

| MINIMUM WATER RESERVE | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Autoclave | Calibration pressure switch | | | | | | | | | | | |
| | Pressure Min. | 1 | 1 | 1 | 1,5 | 1,5 | 2 | 2 | 2,5 | 2,5 | 4 | 5 |
| Lt | Pressure Max. | 2 | 2,5 | 3 | 2,5 | 3 | 2,5 | 4 | 4 | 5 | 8 | 10 |
| 24 | | 8,0 | 10,3 | 12,0 | 6,9 | 9,0 | 3,4 | 9,6 | 7,2 | 10,0 | 10,7 | 10,9 |
| 60 | | 20,0 | 25,7 | 30,0 | 17,1 | 22,5 | 8,6 | 24,0 | 18,0 | 25,0 | 26,7 | 27,3 |
| 100 | | 33,3 | 42,9 | 50,0 | 28,6 | 37,5 | 14,3 | 40,0 | 30,0 | 41,7 | 44,4 | 45,5 |
| 200 | | 66,7 | 85,7 | 100,0 | 57,1 | 75,0 | 28,6 | 80,0 | 60,0 | 83,3 | 88,9 | 90,9 |
| 300 | | 100,0 | 128,6 | 150,0 | 85,7 | 112,5 | 42,9 | 120,0 | 90,0 | 125,0 | 133,3 | 136,4 |
| 500 | | 166,7 | 214,3 | 250,0 | 142,9 | 187,5 | 71,4 | 200,0 | 150,0 | 208,3 | 222,2 | 227,3 |
| 750 | | 250,0 | 321,4 | 375,0 | 214,3 | 281,3 | 107,1 | 300,0 | 225,0 | 312,5 | 333,3 | 340,9 |
| 1.000 | | 333,3 | 428,6 | 500,0 | 285,7 | 375,0 | 142,9 | 400,0 | 300,0 | 416,7 | 444,4 | 454,6 |

## ► RESERVOIRS, TANKS FOR DRINKING WATER

**FEATURES OF USE**

The adoption of specific formulations of linear polyethylene tanks gives the unique properties of lightness, strength to mechanical, chemical resistance, flexibility and superior durability in continuous operation guaranteed activation of anti UV

**TECHNICAL SPECIFICATIONS**

- 100% Prevents the formation of algae
- Frost resistance from - 60 ° C to + 80 ° C.
- Absolute resistance to UV rays
- Monolithic and seamless
- Fittings and walls merged into a single body
- A CE

**EQUIPMENT**

- Pre-drilling for loading Ø ¾ “
- Discharge of Ø 1 “¼
- Overflow hole for emptying and total Ø 1 “
- Pressure relief valve Ø 1 “
- Caps and Seals
- Kit nipples

All measurements have a tolerance of ± 1%, while capacity, Has a tolerance of ± 10%.

## HORIZONTAL TANKS

| Type | Capacity lt | Height | Width | Depth | Ø closure |
|---|---|---|---|---|---|
| | | cm. | | | |
| CON 300 | 290 | 82 | 73 | 82 | 32 |
| CON 500 | 500 | 94 | 87 | 98 | |
| CON 750 | 760 | 97 | | 142 | |
| CON 1000 | 1.000 | 115 | 106 | 127 | |
| CON 1500 | 1.500 | 133 | 125 | 137 | |
| CON 2000 | 1.950 | 144 | 136 | 155 | |
| CON 3000 | 2.970 | 166 | 160 | 185 | 42 |
| CON 5000 | 4.950 | 186 | 178 | 232 | |
| CON 10000● | 10.400 | 230 | 225 | 310 | 55 |

● Loading and unloading on request - overflow, hole for emptying total, plugs, gaskets, nipples Kit unexpected - Connection to vent Ø 2 “male

**CON**

## VERTICAL TANKS

**NSV**

| Type | Capacity lt | Height | Width | Depth | Ø closure |
|---|---|---|---|---|---|
| | | cm. | | | |
| NSV 100 | 100 | 67 | 48 | | 32 |
| NSV 300 | 300 | 97 | 70 | | |
| NSV 3000 | 3.000 | 198 | 147 | | 42 |
| NSV 4000 | 4.000 | 206 | 169 | | |

## PAN TANKS

**PAN**

| Type | Capacity lt | Height | Width | Depth | Ø closure |
|---|---|---|---|---|---|
| | | cm. | | | |
| PAN 1000 | 1.050 | 96 | 137 | | 42 |
| PAN 2000 | 2.050 | 139 | 157 | | |
| PAN 3000● | 3.050 | 128 | 194 | | |
| PAN 5000● | 4.950 | 142 | 238 | | |

● Loading and unloading on request - hole total emptying, plugs, gaskets, nipples and overflow kit not provided

## UNDERGROUND TANKS

INPAN

INVSV

INCON

Lock with key

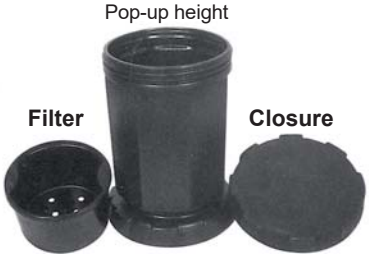
Eyebolt

INPOZ

Pop-up height

Filter

Closure



| Type | Code | Capacity lt | Height | Width | Depth | Ø closure |
|---|---|---|---|---|---|---|
| | | | cm. | | | |
| INPAN 500 | OSB840 | 490 | 77 | 105 | | 32 |
| INPAN 1000 | OSB841 | 1.050 | 96 | 137 | | 42 |
| INVSV1500● | OSB842 | 1.360 | 150 | 117 | | |
| INVSV 2000● | OSB846 | 2.250 | 182 | 136 | | |
| INVSV 3000● | OSB844 | 3.070 | 219 | 146 | | |
| INVSV 4000● | OSB845 | 4.200 | 224 | 165 | | |
| INVSV 5000● | OSB847 | 5.100 | 229 | 184 | | |
| INVSV 6000● | OSB848 | 5.980 | 257 | 185 | | |
| INCON 500 | OSB826 | 500 | 94 | 87 | 98 | 32 |
| INCON 750 | OSB827 | 760 | 97 | 87 | 142 | |
| INCON 1000 | OSB828 | 1.050 | 115 | 106 | 127 | |
| INCON 1500 | OSB829 | 1.500 | 133 | 125 | 137 | |
| INCON 2000 | OSB830 | 1.950 | 144 | 136 | 155 | |
| INCON 3000 | OSB831 | 2.970 | 166 | 160 | 185 | 42 |

Ready drilling loading, unloading, total emptying overflow - Caps, Seals and nipples kit not provided - Male fitting for vent Ø2 “

● Connection to vent female Ø1 “

| Type | Code | | Height | Width | Depth |
|---|---|---|---|---|---|
| | | | cm. | | |
| INPOZ 60 | OPZ150 | Boxs with filter, pop-up height and manhole | 62 | 52 | |
| INPOZ 320 | OPZ151 | | | | |

## ADAPTERS WITH THREAD GAS TANK M AND F

| Type | Connection tank | Thread gas | | Gasket EPDM included |
|---|---|---|---|---|
| RAT 100 | S60 x 6 (60mm, distance ridges 6 mm) | 1” | Male | |
| RAT 101 | | | Female | |

## TANK MIX

Reagent dosage TANK MIX specially realized for mixing stations. Vertical cylindrical tanks with flat bottom, the upper side is on two different level: to apply metering pumps and/or vertical axis electro-shakers.
TANK MIX provide : a hatch for full load, threaded plug, visual gauge tank. Suitable to apply drain vales on the lower front side.

| Type | Code | Capacity lt | Height | Ø | Ø conn. |
|---|---|---|---|---|---|
| | | | cm. | | |
| MIX 120 | OSB889 | 120 | 680 | 500 | ½” |
| MIX 325 | OSB990 | 325 | 890 | 710 | |
| MIX 550 | OSB991 | 550 | 1.000 | 885 | 1” |
| MIX 1070 | OSB992 | 1.070 | 1.200 | 1.100 | |

MIX

## ORCI

| Type | Code | Capacity lt | Height | Ø | Ø closure |
|---|---|---|---|---|---|
| | | | cm. | | |
| ORCIO 200 | OSB900 | 200 | 85 | 73 | 37 |
| ORCIO 300 | OSB901 | 300 | 96 | 83 | |
| ORCIO 500● | OSB902 | 500 | 111 | 98 | 45 |
| ORCIO 1000● | OSB905 | 960 | 140 | 116 | |

Hole for loading Ø ¾” - Vent valve not provided

● Preparing drilling for loading Ø ¾ “- Overflow not provided

ORCI

**FITTING FOR HANSEN TANK SEE ON PAGE 10**

**HANSEN REGULATORS LEVEL SEE ON PAGE 14**

**METAL STRENGHTENED SEE ON PAGE 133**

## ► OXYGENATOR FOR LAKES

- Splash: Light weight easy to handle. One person can easily carry and install the unit.
- Corrosion proof. Suitable for use in salt water or fresh water.
- Easy and low cost maintenance. Can be serviced by the user.
- Double propeller high flow capacity performance on 1400 rpm models.
- Single propeller for fountain like water stream.
- CE certified.
- Energy efficient for successful water quality management with no bottom turbulence.

**BRIO**
BRIO is a compact and powerful water circulator featuring a motor adjustable at desired depth. Saltwater compatible.

**RIO**
RIO with 1HP engine can move huge volumes of water. Its low speed doesn't disturb or damage water ecosystems.

| Description | | Code | Power Nominal Hp | Power Nominal Kw | Power Absorbed Kw | Q l/m | $O_2$ Transfer Kg/h | R.p.m. | Lenght wire engine mt | Weight Kg |
|---|---|---|---|---|---|---|---|---|---|---|
| Splash | Singlephase | OKT027 | 0,5 | 0,37 | 0,6 | 2.000 | 0,8 | 1.400 | 20 | 24 |
| | Three Phase | OKT024 | | | | | | | | |
| | Singlephase | OKT028 | 1,0 | 0,75 | 1,2 | 3.200 | 1,4 | | | 25 |
| | Three Phase | OKT025 | | | | | | | | |
| | Singlephase | OKT040 | 1,8 | 1,30 | 1,7 | 3.100 | 1,3 | 2.800 | | |
| | Three Phase | OKT045 | | | | | | | | |
| Protezione per Splash | Chiusa | OKT070 | | | | | | | | |
| | Aperta | OKT071 | | | | | | | | |
| Brio | Singlephase | OKT250 | 0,5 | 0,37 | 0,6 | | | 1.400 | | 13 |
| | Three Phase | OKT251 | | | | | | | | |
| | Singlephase | OKT252 | 1,0 | 0,75 | 1,2 | | | | | 20 |
| | Three Phase | OKT253 | | | | | | | | |
| Force 7 | Singlephase | OKT254 | 1,0 | 0,75 | 1,0 | | | 2.800 | | 11 |
| | Three Phase | OKT255 | | | | | | | | |
| | Singlephase | OKT256 | 1,5 | 1,10 | 1,6 | | | | | 14 |
| | Three Phase | OKT257 | | | | | | | | |
| Rio Bravo | Singlephase | OKT258 | 1,0 | 0,75 | | | | 1.400 | 5 | 38 |
| | Three Phase | OKT259 | | | | | | | | |
| Rio Grande | Singlephase | OKT260 | 2,0 | 1,50 | | | | | | 42 |
| | Three Phase | OKT261 | | | | | | | | |
| Sprint | Singlephase | OKT262 | 1,0 | 0,75 | 0,9 | 1.110 | | 2.850 | | 24 |
| | Three Phase | OKT263 | | | 0,8 | | | | | |
| | Singlephase | OKT264 | 1,5 | 1,00 | 1,1 | 1.250 | | | | |
| | Three Phase | OKT265 | | | 1,0 | | | | | |
| Set lights with timer for Sprint only 220V | Singlephase | OKT266 | | | | | | | | |
| Combo | Brio 1 hp + Force 7/1 | OKT267 | | | | | | | | |
| | Rio 1 hp + Force 7/2 | OKT268 | | | | | | | | |
| | Rio 2 hp + Force 7/1 | OKT269 | | | | | | | | |
| | Rio 2 hp + 2 Force 7/2 | OKT270 | | | | | | | | |

Splash

Optional protection closed for Splash

Optional protection open for Splash

Brio

Force 7

Sprint

Lights for Sprint

Combo

## ► ELECTRICAL CONTROL

## SA SERIES (STARTING BOXES)

**STARTER MOTORS SINGLE-PHASE BY HP 0.5 ÷ 2**
**DESCRIPTION**: Input network 1 - 230V 50/60 Hz ± 10% • Input for pressure switch or float switch • Capacitor gear • Thermal protection reset externally • General switch light 0 -1 • thermoplastic enclosure • Output with cable • electric scheme • Degree of protection IP50 • Fixing to the wall with knockouts.
**LIMITS OF USE**: Ambient temperature: -5 To +40 ° C • Relative humidity: 50% at 40 ° C.

| Electrical control equipment "SA Series" (starting boxes) - 230V single phase | | | | | |
|---|---|---|---|---|---|
| For submersible pumps 4" | | | | | |
| Type | Code | Nom. pow. Hp | Nom. pow. Kw | Thermal protection A | Condenser µF |
| SA 0,5 4A 16 | ESA001 | 0,50 | 0,37 | 4 | 16 |
| SA 0,75 6A 20 | ESA010 | 0,75 | 0,55 | 6 | 20 |
| SA 1 8A 25 | ESA020 | 1,00 | 0,75 | 8 | 25 |
| SA 1,5 12A 35 | ESA053 | 1,50 | 1,10 | 12 | 35 |
| SA 2 16A 40 | ESA040 | 2,00 | 1,50 | 16 | 40 |
| For submersible pumps 5" | | | | | |
| Type | Code | Nom. pow. Hp | Nom. pow. Kw | Thermal protection A | Condenser µF |
| SA 0,75 6A 16 | ESA054 | 0,75 | 0,55 | 6 | 16 |
| SA 1 8A 20 | ESA055 | 1,00 | 0,75 | 8 | 20 |
| SA 1 10A 30 | ESA056 | 1,00 | 0,75 | 10 | 30 |
| SA 1,5 10A 30 | ESA057 | 1,50 | 1,10 | 10 | 30 |
| SA 2 14A 35 | ESA058 | 2,00 | 1,50 | 14 | 35 |

## QEL SERIES

**QEL M: starter electropump for single phase**
**QEL T: starter electropmp for three-phase electric**

**DESCRIPTION**:
- Electronic control panel
- Input connection 1 ~ 230 V 50/60 Hz ± 10% (SINGLEPHASE VERSION)
- Input connection 3 ~ 400V 50/60 Hz ± 10% (THREEPHASE VERSION)
- Very low voltage inputs for external pressure switch or float
- Very low voltage inputs for external control by 3 level probes
- Probes suitable for conductive liquids non flammable
- Selector for the operation of filling / emptying
- Internal sensor sensitivity regulator
- Selector switch for operating the engine in AUTO-OFF-MANUAL
- Green LED for power on
- Green LED for motor running
- Red led water level alarm
- Red led for motor protection
- Line contactor 400V AC3 (PHASE VERSION)
- Adjustable amperometric protection
- Reaction time adjustable 0-5 sec
- Fuse protection of auxiliary
- Motor protection fuse
- Alarm output with changeover contacts 16A 250V resistive load
- Main switch with door lock can be padlocked in the OFF position
- Prepared for the insertion of a capacitor (not included)

(SINGLE PHASE VERSION)
- thermoplastic enclosure
- Output with cable
- protection IP55.

**LIMITS OF USE**: Ambient temperature: -5 to +40 ° C • Humidity 50% relative to 40 °
**N.B.**: probes are considered optional

| ELECTRICAL CONTROL EQUIPMENT QEL SERIES | | | | | |
|---|---|---|---|---|---|
| Type | Code | Nom. pow. Hp | Nom. pow. Kw | Thermal protection A | Current |
| QEL M | EQE520 | 0,5 / 3 | 0,37 / 2,2 | 2 / 18 | Single phase |
| QEL T | EQE526 | 0,75 / 7,5 | 0,55 / 5,5 | 2 / 15 | Three-phase |

# EQE SERIES

**COMMON FEATURES**:
watertight box: IP56 ● Contactor sized ● Thermal relay: with adjustable scale ● Condenser: Dry (single-phase version) ● general selector: door lock ● Transformer: for the auxiliary service in low ● Voltage Indicator: White (network) -Green (operation) - Red (pump unit) ● Selector: M - O - A ● Terminal block for connections ● Fuse Holder general for the protection of the auxiliary service ● Preparation for kit level probes against dry running

| QEM SERIES | | | | | |
|---|---|---|---|---|---|
| Type | Nom. pow. Hp | Nom. pow. Kw | Thermal protection A | Current | Condenser µF |
| EQE M 0,5 | 0,50 | 0,37 | 3,0 ÷ 4,5 | Singl. ph. | 16 |
| EQE M 0,75 | 0,75 | 0,55 | 4,5 ÷ 6,5 | | 20 |
| EQE M 1 | 1,00 | 0,75 | 6,0 ÷ 9,0 | | 25 |
| EQE M 1,5 | 1,50 | 1,10 | 9,0 ÷ 10,5 | | 35 |
| EQE M 2 | 2,00 | 1,50 | 9,0 ÷ 13,5 | | 40 |
| EQE M 3 | 3,00 | 2,20 | 14,0 ÷ 18,0 | | 50 |
| EQE T 0,5 | 0,50 | 0,37 | 0,9 ÷ 1,3 | Three-phase | |
| EQE T 0,75 | 0,75 | 0,55 | 1,4 ÷ 2,0 | | |
| EQE T 1 | 1,00 | 0,75 | 2,0 ÷ 3,2 | | |
| EQE T 1,5 | 1,50 | 1,10 | | | |
| EQE T 2 | 2,00 | 1,50 | 3,0 ÷ 4,5 | | |
| EQE T 3 | 3,00 | 2,20 | 4,5 ÷ 6,8 | | |
| EQE T 4 | 4,00 | 3,00 | 5,5 ÷ 8,0 | | |
| EQE T 5,5 | 5,50 | 4,00 | 6,0 ÷ 9,0 | | |
| EQE T 7,5 | 7,50 | 5,50 | 9,0 ÷ 12,0 | | |
| EQE T 10 | 10,00 | 7,50 | 14,0 ÷ 16,0 | | |
| EQE T 12,5 | 12,50 | 9,20 | 14,0 ÷ 20,0 | | |
| EQE T 15 | 15,00 | 11,00 | 17,0 ÷ 25,0 | | |
| EQE T 25 | 25,00 | 18,00 | 35,0 ÷ 50,0 | | |

**EQEM F**

**EQEM F M**: starter for 1 automatic electropump single phase
**EQEM F T**: starter for 1 automatic electropump three phases
**ADDITIONAL FEATURES**:
- module level probes against dry running protection for pump
- Selector: M - O – A control solenoid aqueduct
- Led solenoid aqueduct in function
- Pump control unit for irrigation
- Selector: O - I 220 Volt Power Supply Command in Terminal Control Unit for Irrigation

**EQEM H**

**EQEM H M**: starter for 1 automatic electropump single phase from solenoid command and control
**EQEM H T**: starter for 1 automatic electropump three-phase from electrovalve to control unit
**ADDITIONAL FEATURES**:
- Module level probes against dry running protection for pump
- Module probes replenishing tank to solenoid aqueduct
- Selector: M - O - A solenoid-operated water supply
- Led solenoid aqueduct in function
- Pump control to control irrigation
- Selector: O - I 220 volt power to command in the terminal to control irrigation
- Option level relay

**EQEM G**

**EQEM G M**: starter for 1 electropump single phase electric pump and control unit
**EQEM G T**: starter 1 starter for three-phase electric pump and control unit
**ADDITIONAL FEATURES**:
- Pump control to control irrigation
- Selector: O - The 220 volt power to command in the terminal to control irrigation
- Option level relay

Models EQEM GMP and HMP have in addition the protection of minimum pressure that allows to protect the surface pumps from disengaging.
**N.B.**: probes are considered optional
Available on request D model (base) and F (for water base)

| Code series EQE M - 230V monophase | | | | | | | |
|---|---|---|---|---|---|---|---|
| Type | HP | Kw | | G | H | GMP | HMP |
| EQE M 0,5 | 0,50 | 0,37 | Code | EQEM-G/M0,5 | EQEM-H/M0,5 | EQEM-G/MP0,5 | EQEM-H/MP0,5 |
| EQE M 0,75 | 0,75 | 0,55 | | EQEM-G/M0,75 | EQEM-H/M0,75 | EQEM-G/MP0,75 | EQEM-H/MP0,75 |
| EQE M 1 | 1,00 | 0,75 | | EQEM-G/M1 | EQEM-H/M1 | EQEM-G/MP1 | EQEM-H/MP1 |
| EQE M 1,5 | 1,50 | 1,10 | | EQEM-G/M1,5 | EQEM-H/M1,5 | EQEM-G/MP1,5 | EQEM-H/MP1,5 |
| EQE M 2 | 2,00 | 1,50 | | EQEM-G/M2 | EQEM-H/M2 | EQEM-G/MP2 | EQEM-H/MP2 |
| EQE M 3 | 3,00 | 2,20 | | EQEM-G/M3 | EQEM-H/M3 | EQEM-G/MP3 | EQEM-H/MP3 |
| Code series “EQE T” - 400V threephase | | | | | | | |
| Type | HP | Kw | | G | H | GMP | HMP |
| EQE T 0,5 | 0,50 | 0,37 | Code | EQEM-G/T0,5 | EQEM-H/T0,5 | EQEM-G/MPT0,5 | EQEM-H/MPT0,5 |
| EQE T 0,75 | 0,75 | 0,55 | | EQEM-G/T0,75 | EQEM-H/T0,75 | EQEM-G/MPT0,75 | EQEM-H/MPT0,75 |
| EQE T 1 | 1,00 | 0,75 | | EQEM-G/T1 | EQEM-H/T1 | EQEM-G/MPT1 | EQEM-H/MPT1 |
| EQE T 1,5 | 1,50 | 1,10 | | EQEM-G/T1,5 | EQEM-H/T1,5 | EQEM-G/MPT1,5 | EQEM-H/MPT1,5 |
| EQE T 2 | 2,00 | 1,50 | | EQEM-G/T2 | EQEM-H/T2 | EQEM-G/MPT2 | EQEM-H/MPT2 |
| EQE T 3 | 3,00 | 2,20 | | EQEM-G/T3 | EQEM-H/T3 | EQEM-G/MPT3 | EQEM-H/MPT3 |
| EQE T 4 | 4,00 | 3,00 | | EQEM-G/T4 | EQEM-H/T4 | EQEM-G/MPT4 | EQEM-H/MPT4 |
| EQE T 5,5 | 5,50 | 4,00 | | EQEM-G/T5,5 | EQEM-H/T5,5 | EQEM-G/MPT5,5 | EQEM-H/MPT5,5 |
| EQE T 7,5 | 7,50 | 5,50 | | EQEM-G/T7,5 | EQEM-H/T7,5 | EQEM-G/MPT7,5 | EQEM-H/MPT7,5 |
| EQE T 10 | 10,00 | 7,50 | | EQEM-G/T10 | EQEM-H/T10 | EQEM-G/MPT10 | EQEM-H/MPT10 |
| EQE T 12,5 | 12,50 | 9,20 | | EQEM-G/T12,5 | EQEM-H/T12,5 | EQEM-G/MPT12,5 | EQEM-H/MPT12,5 |
| EQE T 15 | 15,00 | 11,00 | | EQEM-G/T15 | EQEM-H/T15 | EQEM-G/MPT15 | EQEM-H/MPT15 |
| EQE T 25 | 25,00 | 18,00 | | EQEM-G/T25 | | | |

**G = protection pump + automatic control from programmer - H = G + automatic reinstatement - GMP = G + MP (min. protection pression) - HMP = H + MP (min protection pressure) ● N.B.: available for model D e F (economic version for G e H)**

## ► INVERTER

### INVERTER WITH 1 CHANNEL CONSTANT PRESSURE

| Domestic inverter for electropumps single phase | | | | |
|---|---|---|---|---|
| Type | Code | Line | Motor | A max |
| PWM230 1-Basic 8,5 | EIV001 | Single phase | Single phase | 8,5 |
| PWM230 1-Basic Dual 11 | EIV003 | | | 11,0 |
| PWM230 1-Basic Dual 14 | EIV005 | | | 14,0 |
| | | | | |
| Domestic inverter high performance | | | | |
| Type | Code | Line | Motor | A max |
| PWM230 D/10,5 | EIV002 | Single phase | Three-phase | 10,5 |

| Inverter for big powers | | | | |
|---|---|---|---|---|
| Type | Code | Line | Motor | A max |
| PWM400 D/7,5 | EIV011 | Three-phase | Three-phase | 7,5 |
| PWM400 D/13,3 | EIV014 | | | 13,3 |

PWM 230

PWM 400

### VACON 100 FLOW

VACON 100 FLOW Invare created to enhange the flow control during installation of drinking and waste water building automation. Certificated protection: IP54/UL model 12 ( IP21 and IP66 available on request). Special Function are supplied specifically to support the installation of the Inverter on water pumps and fans. One is the serial PID controller that can manage the pump speed by special sensor avoiding any external control: this permits to get in line with the fluctuations in demand. The Wizard startup and the configuration menu could be started through the control panel or from any PC thanks to VACON Live device which permits to set it online.
The connection between VACON 100 FLOW and the current control system is realized by integrated Ethernet interface: this permits the communication to the automation systems without additional option or gateway. VACON 100 FLOW inverters use DC link technology in plastic film, without electrolytic capacitors, with the guarantee of a longer life: avoiding the replacement of electrolytic capacitors, which ruin quickly, interruptions and costs are certainly reduced.

| Code | A charge | | Maximum input current | Overload motor power 10% at 40° C | | Dimensions mm L x H x P | Weight Kg |
|---|---|---|---|---|---|---|---|
| | Direct current $I_L$ | Admissible overload current 10% | $I_S$ | Kw | Hp | | |
| EIV214 | 3,4 | 3,7 | 5,2 | 1,1 | 1,5 | 128 x 328 x 190 | 6 |
| EIV215 | 4,8 | 5,3 | 6,8 | 1,5 | 2 | | |
| EIV216 | 5,6 | 6,2 | 8,6 | 2,2 | 3 | | |
| EIV205 | 8,0 | 8,8 | 11,2 | 3,0 | 4 | | |
| EIV217 | 9,6 | 10,6 | 16,0 | 4,0 | 5 | | |
| EIV203 | 12,0 | 13,2 | 19,2 | 5,5 | 7,5 | | |
| EIV207 | 16,0 | 17,6 | 24,0 | 7,5 | 10 | 144 x 419 x 214 | 10 |
| EIV208 | 23,0 | 25,3 | 32,0 | 11,0 | 15 | | |
| EIV218 | 31,0 | 34,1 | 46 | 15,0 | 20 | | |
| EIV219 | 38,0 | 41,8 | 62 | 18,5 | 25 | 195 x 557 x 229 | 20 |
| EIV220 | 46,0 | 50,6 | 76 | 22,0 | 30 | | |

Main power supply: 380 - 500 V, 50/60 Hz, three-phase

## ► CONDENSERS FOR SINGLE PHASE MOTORS

| Condenser capacity µF | Dimensions mm | | Matching with submergible pumps | |
|---|---|---|---|---|
| | | | 4” | 5” |
| | Ø | Length | Power Hp | |
| 16 | 35 | 71 | 0,50 | 0,75 |
| 20 | 40 | | 0,75 | 1,00 |
| 25 | 45 | | 1,00 | 1,50 |
| 35 | 45 | 91 | 1,50 | 2,00 |
| 40 | | | 2,00 | |
| 50 | | 116 | 3,00 | |

Working voltage of 450 volts

## ▶ PRESSURE CONTROL SYSTEMS

### FLOWSYSTEM - EPS175

The FlowSystem matching to the special 4-way junction can replace the jar expansion from 24 litres saving of space. Thanks to a particular mechanism, it allows to control the flow, obtaining a continuous operation of the pump with a minimum flow rate over 5 lt / min.

**TECHNICAL SPECIFICATIONS**
- Connection: Ø 1 “
- Maximum flow rate: 120 l / min
- Maximum Pressure: 6 bar
- Maximum temperature: 40 ° C.

### PRESSCONTROL

A device that replaces the traditional system of the expansion tank.

**MAIN FUNCTIONS:**
- Starts or stops working pump opening or closing
- Keep pressure constant during use;
- Stops the pump in case of lack of water;
- Reduces the effects of water hammer.

**TECHNICAL SPECIFICATIONS**
- Connection: Ø 1 “
- Maximum Pressure: 10 bar
- Maximum temperature: 65 ° C

| Code | Pressure di lavoro costante impostata |
|---|---|
| EPS100 | 1,2 |
| EPS101 | 2,2 |
| EPS102 | 3,0 |
| EPS105 | 2,2 riarmo automatico |

### PRESSURE SWITCHED WIRED

It is a switch that closes an electrical circuit when the pressure reaches a value of the calibration minimum (zip pump) and opens the same when the pressure reaches the value of the calibration maximum (pump stop). The pressure auto-clave provided with groups are preset in relation to the head of the pump. It ‘always You can change the factory settings in the face of special needs.

| Code | Model | Range calibration | | Differential | |
|---|---|---|---|---|---|
| | | Minimum (starter) | Maximum (stop) | Minimum calibration | Maximum calibration |
| | | Bar | | | |
| EPS002 | SFSG 2 | 1,4 | 4,6 | 1,0 ÷ 1,1 | 1,4 ÷ 2,1 |
| EPS003 | SFYG 22 | 2,8 | 7,0 | 1,2 ÷ 2,1 | 1,6 ÷ 2,4 |
| EPS051 | SFYG 32 | 5,6 | 10,5 | 1,9 ÷ 2,5 | 2,3 ÷ 2,8 |

### PRESSURE SWITCHED WIRED WITH CABLE

Pressure switched wired with mt. 0,5 cable H05RN-F3 XX1.

| Description | | Code |
|---|---|---|
| Pressure switched wired with mt. 0,5 cable H05RN-F3 XX1 | PS9C | EPS006 |

## ► POWER CABLES SUBMERSIBLE PUMPS AND ACCESSORIES

# TABLE OF POWER CABLES FOR SUBMERSIBLE PUMPS

Maximum lengths of the power cables in relation to the diameter of the conductor and to the supply voltage.

| Power cables submersible pumps Neoprene - HO7 RN_F | | |
|---|---|---|
| Type | Power. | Code |
| 3 x 1 mm² | 400V T | CVN001 |
| 3 x 1,5 mm² | | CVN002 |
| 3 x 2,5 mm² | | CVN003 |
| 4 x 1,0 mm² | | CVN016 |
| 4 x 1,5 mm² | 230V M | CVN012 |
| 4 x 2,5 mm² | | CVN010 |
| 4 x 4,0 mm² | | CVN008 |
| 4 x 6,0 mm² | | CVN011 |
| 4 x 10,0 mm² | | CVN019 |
| 4 x 16,0 mm² | | CVN023 |
| 4 x 25,0 mm² | | CVN017 |

| Max length for cable H07 RN-7 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 230 V single phase | | | | 400 V three-phase | | | | | | | |
| | | Core cable in surface section | | | | | | | | | | | |
| | | 1,5 | 2,5 | 4 | 6 | 1,5 | 2,5 | 4 | 6 | 10 | 16 | 25 | 35 |
| Current A | | mm² | | | | | | | | | | | |
| 2 | Maximum lengths in Meters | 182 | | | | 429 | | | | | | | |
| 4 | | 90 | 150 | | | 213 | 354 | | | | | | |
| 6 | | 60 | 100 | 160 | 240 | 141 | 235 | 375 | | | | | |
| 8 | | 44 | 75 | 120 | 180 | 105 | 175 | 281 | 420 | | | | |
| 10 | | 35 | 59 | 95 | 143 | 83 | 139 | 224 | 335 | | | | |
| 12 | | 29 | 49 | 79 | 119 | 68 | 115 | 185 | 279 | 461 | | | |
| 14 | | 24 | 42 | 67 | 102 | 57 | 98 | 158 | 238 | 394 | | | |
| 16 | | 21 | 36 | 59 | 89 | 49 | 85 | 137 | 207 | 344 | | | |
| 18 | | | 32 | 52 | 79 | | 74 | 121 | 184 | 306 | 479 | | |
| 20 | | | | | | | 66 | 108 | 164 | 274 | 431 | | |
| 25 | | | | | | | | 85 | 130 | 218 | 343 | 529 | |
| 30 | | | | | | | | 69 | 106 | 180 | 285 | 440 | |
| 35 | | | | | | | | | 89 | 153 | 243 | 376 | 512 |
| 40 | | | | | | | | | 76 | 132 | 211 | 328 | 446 |
| 45 | | | | | | | | | | 116 | 186 | 290 | 395 |
| 50 | | | | | | | | | | 103 | 166 | 260 | 355 |
| 60 | | | | | | | | | | | 136 | 214 | 294 |
| 70 | | | | | | | | | | | 114 | 181 | 250 |
| 80 | | | | | | | | | | | | 156 | 216 |
| 90 | | | | | | | | | | | | 137 | 190 |
| 100 | | | | | | | | | | | | 121 | 169 |

Data in the chart are calculated considering voltage drop of 4% along the cable.
The flow rates of the cables are laid for an ambient temperature of 30 degrees.

# JOINING KIT SEALED ELECTRICAL CABLES

It allows the connection of electrical cables with junction submerged in water. The use of a heat source (flame or hair dryer) on the shrink wrap causes a leakage of resin that ensures the tightness of the joint.

**THE KIT CONSISTS OF:**

- N° 4 Connectors Insulation
- N° 4 Heat shrinkable tubing for the protection of individual connectors
- N° 1 1 heat shrink tubing to protect the cable pole

| Kit sealed eletrical cables | |
|---|---|
| mm² | Code |
| 4 X 1 - 2,5 | EKIT001 |
| 4 X 4 - 6 | EKIT003 |
| 4 X 4 - 10 | EKIT005 |
| 4 X 4 - 16 | EKIT007 |

# CONNECTION SEALED ASSEMBLED

Upon request we assemble seamless watertight for every need.

## LEVEL CONTROLS AND DRY RUN

The level relay (A) inserted in the control circuit of pumping systems via the socket (B) connects specific probes (C) to allow you to maintain the level of wells or tanks within pre-determined limits and / or block the pumps to prevent damage in the event of dry running.

The **CONTROL KIT RUNNING DRY** is composed of:

- N ° 1 control relay (A)
- 1 socket for relay (B)
- 3 level probes (C)

| Level controls and dry run | |
|---|---|
| Description | Code |
| Level control kit with 3 probes | ESN100 |
| Level probe | ESN001 |
| Level relè 24 -240V AC | ERL205 |

Relè (A) Base (B)

Level probe (C)

## FLOAT SWITCH

it allows adjustment of the level of a liquid making automatic the electrical equipment connected.

**TECHNICAL DATA**

- contact absorption max amp 10/250 V
- cable length: 2 - 5 - 10 - 15 mt
- connecting cable: PVC 3 x 1 mm$^2$

| Interruttori a galleggiante | | |
|---|---|---|
| Mt cable | Cable sheath | Code |
| 2 | Neoprene (on request in PVC) | EGL011 |
| 5 | | EGL012 |
| 10 | | EGL013 |
| 15 | | EGL014 |

## ► WELLS ACCESSORIES

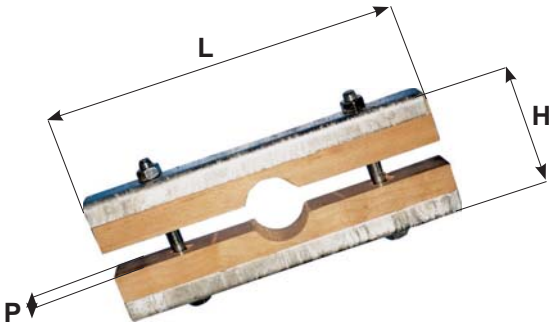
## HEADS OF WELL IN COMPLETE PVC GLANDS

Wellheads in PVC with diameter hole to request and complete with cable glands. Outside diameters until 200 mm.

## CLAMPS IRON / WOOD SUPPORT PUMP

For support of any submersible pump inside the well, depending on the diameter of the pipe.

| DIMENSIONS CLAMPS | | | |
|---|---|---|---|
| | L | H | P |
| Pipes Ø | cm | | |
| 1" ÷ 2"½ | 30 | 9,5 | 4 |
| 3" | 35 | 13,0 | 6 |
| 4" ÷ 6" | 45 | 17,5 | 8 |



## ► OUTLET PIPE FOR SUBMERSIBLE PUMP

The outlet pipe is made of high quality rigid PVC to connect the submersible pumps to the distribution network. Its special extrusion and chemical-physical structure ensure the resistance to high internal pressure and the weights of traction, created by summing the various forces to which the structure installed and in use is subjected.

| Diameters pumps and output | |
|---|---|
| Ø nominal pump | Ø out F gas thread for connection pipe |
| Inches | |
| 3” | 1” |
| 4” | 1”¼ |
| | 2” |
| 6” | 2”½ |
| 6” | 3” |
| 8” | |
| 10” | 5” |

These tubes have an outstanding impact resistance, show no damage or deformation during laboratory tests or simulations handling and install and uninstall. They are lightweight and easy to handle and transport. Trapezoid are threaded at the ends are male-male provided with a pre-installed and locked in company sleeve on one end of the tube. The sleeve is internally provided with two seals that guarantee the seal hydraulics. A mechanical lock inserted into a sleeve at home screwing the case prevents accidental loosening caused by vibrations or abnormal twisting of the column avoiding related problems. The connection to the pump is via a dedicated connection stainless steel which in addition to ease of installation reduces time and costs.

These tubes have inner walls completely smooth and without any shrinkage, are not affected by any kind corrosion and are not attacked by stray currents in the ground.

The test results showed an excellent hydrodynamic coefficient Hydraulic (k = 0.01), which provides more than a negligible loss of flow rate and lower pumping costs, also reduced the effects of water hammer due to the slower rate of flow, a third compared to the pipeline metal.

These tubes are certified to transport drinking water and liquid foods in general, and as such have no influence on water quality transported and do not exhibit alterations in the composition of the same.

| Stainless steel fitting for connection to submersible pumps | | | |
|---|---|---|---|
| | Connection M for pump thread Gas | Connection F for pipe flow trapezoidal thread | |
| Code | Inches | | mm |
| TMA001 | 1”¼ | 1”½ | 48 |
| TMA002 | 2” | 2” | 60 |
| TMA003 | 2”½ | 2”½ | 75 |
| TMA004 | | 3” | 90 |
| TMA005 | 3” | | |
| TMA006 | | 4” | 113 |
| TMA007 | 5” | 5”½ | 140 |
| TMA008 | Flangia | 6”½ | 170 |
| TMA009 | | 8”½ | 225 |
| TMA010 | Nipplo inox | 1” | |
| TMA011 | | 1”¼ | |
| TMA012 | | 2” | |
| TMA013 | | 2”½ | |
| TMA014 | | 3” | |
| TMA015 | | 5” | |

| Delivery hose | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Ø external | | Thick. mm | Øint | Sleeve Øest | | Weight pipe kg/mt | Tensile strength kg |
| Code | mm | Inches | mm | | | Thread | | |
| TMP001 | 48 | 1”½ | 4,5 | 39,0 | 60 | TPN4 | 0,9 | 2,0 |
| TMP002 | 60 | 2” | 5,8 | 48,4 | 75 | | 1,5 | 2,7 |
| TMP003 | 75 | 2”½ | 6,8 | 61,4 | 90 | | 2,2 | 4,0 |
| TMP004 | 90 | 3” | 8,2 | 73,6 | 105 | | 3,1 | 7,0 |
| TMP005 | 114 | 4” | 8,2 | 97,6 | 130 | TPN6 | 4,0 | 8,6 |
| TMP005 | 140 | 5” | 10,3 | 119,4 | 170 | | 6,2 | 17,0 |
| TMP006 | 170 | 6” | 12,0 | 146,0 | 200 | | 8,8 | 19,3 |
| TMP007 | 225 | 8” | 16,7 | 191,6 | 265 | | 16,2 | 25,0 |

Note: each bar is 4m + 1 sleeve

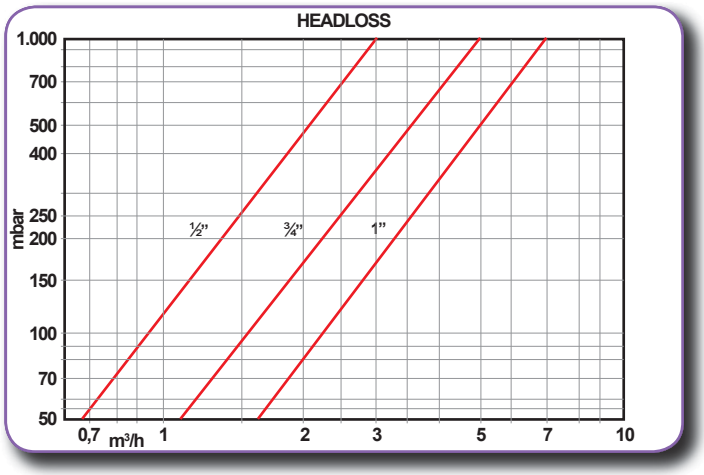
## ▶ COUNTERS FOR COLD WATER

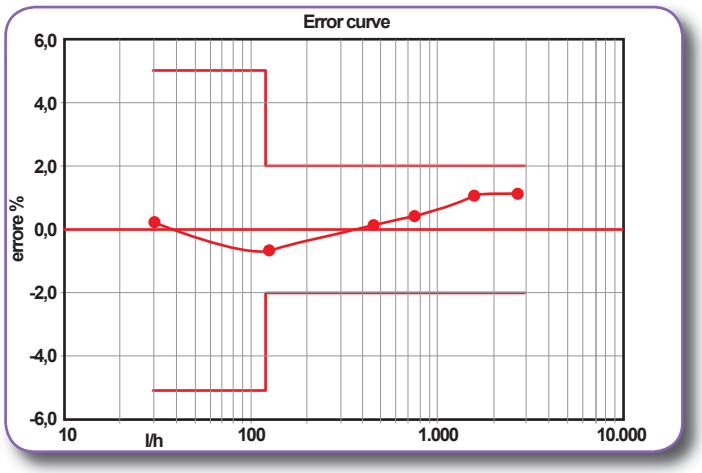
### SUPERDRY ALFA SERIES

Turbine meter for cold water jet only tangential with direct reading on 8 numbered rolls. There is version hot water up to 90 ° C temperature.

**FEATURES**:

- dry dial with special magnetic shield fraud
- magnetic transmission
- watches in vacuum sealed capsule fog
- resistance to frost certified
- brass case
- 75/33 EEC approved - Class B



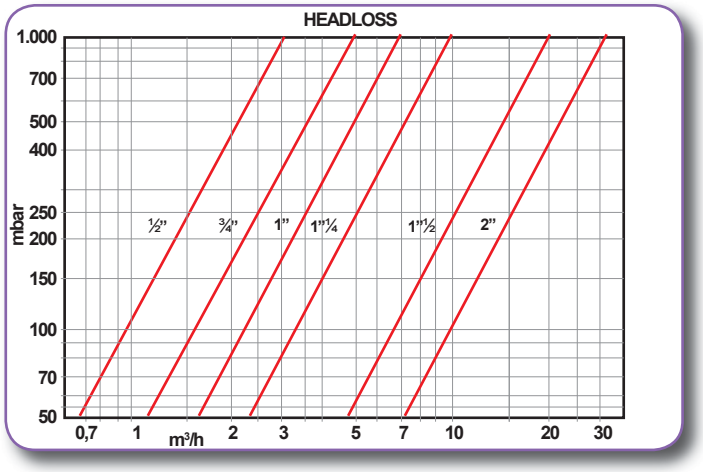

| Ø | $Q_{min}$ lt/h | Qt | Qn $m^3/h$ | $Q_{max}$ | $P_{max}$ bar | Lenght mm. | Larg. |
|---|---|---|---|---|---|---|---|
| ½" | 25 ÷ 30 | 120 | 1,5 ÷ 2,5 | 3 | 16 | 110 | 72 |
| ¾" | 50 | 200 | 2,5 | 5 | | 130 | |
| 1" | 70 | 280 | 3,5 | 7 | | 160 | |

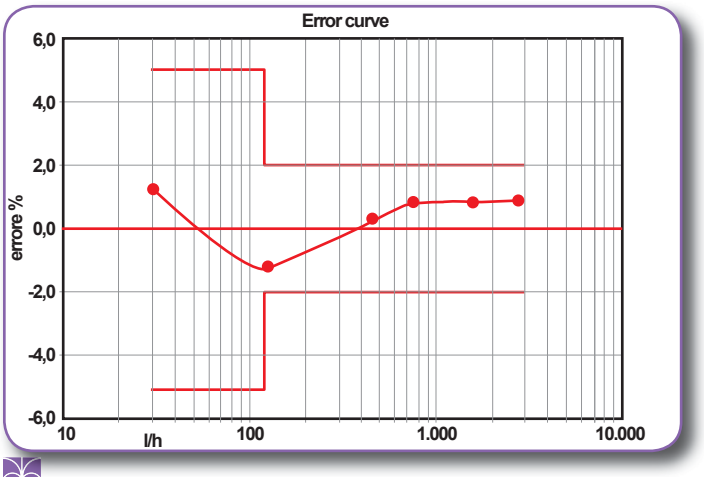
### SUPERDRY BETA SERIES

Turbine meter for cold water jet shared with the measuring chamber to the double series of tangential holes and reading live on 5 reels numbered.

**FEATURES**:

- dry dial adjustable 360 ° with special magnetic shield Fraud
- magnetic transmission
- watches in vacuum sealed capsule fog
- Case brass or cast iron for the model 2"
- 75/33 EEC approved - Class B



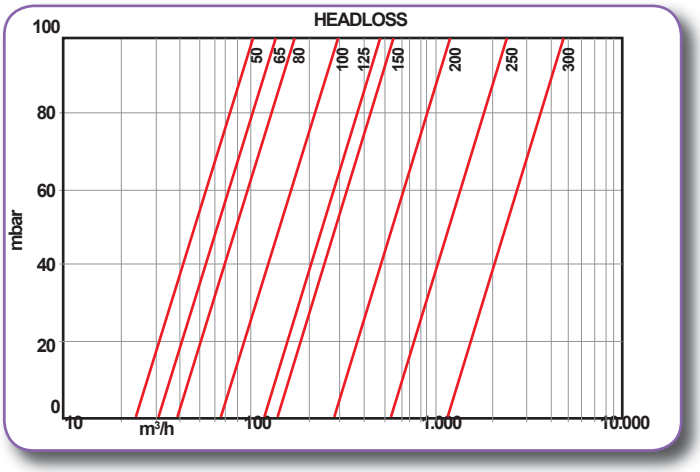

| Ø | $Q_{max}$ $m^3/h$ | Qn | Qt lt/h | $Q_{min}$ | Loss $Q_{max}$ bar | Lenght mm | Larg. | Alt. | Weight kg |
|---|---|---|---|---|---|---|---|---|---|
| ½" | 3 | 1,5 | 120 | 30 | 1 | 165 | 99 | 107 | 1,20 |
| ¾" | 5 | 2,5 | 200 | 50 | | 190 | | 109 | 1,45 |
| 1" | 7 | 3,5 | 280 | 70 | | 260 | 104 | 115 | 2,00 |
| 1"¼ | 12 | 6,0 | 400 | 100 | | | | 120 | 2,30 |
| 1"½ | 20 | 10,0 | 800 | 200 | | 300 | 125 | 148 | 4,20 |
| 2" | 30 | 15,0 | 3.000 | 450 | | | | 173 | 9,60 |

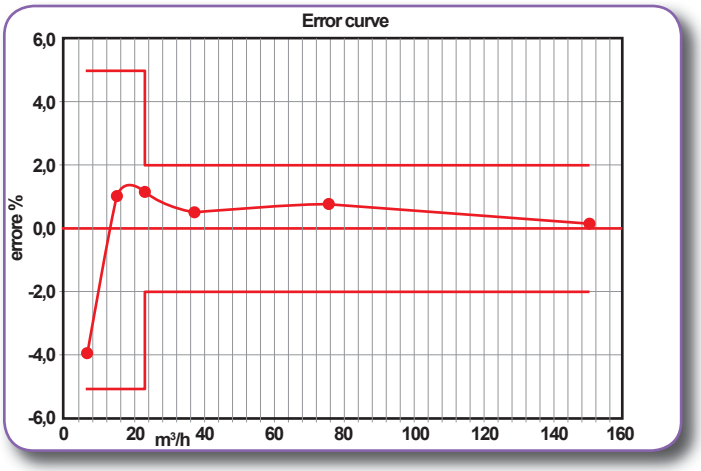
## TANGENTIAL SERIES

Counter for cold water, single-jet tangential straight reading encrypted. There is version for hot water up to 60 ° C temperature.

**FEATURES**:

- dry dial with special magnetic shield Fraud
- magnetic transmission
- clockwork removable capsule Hermetic vacuum fog
- invades the reel only partially the section of passage of water
- suitable for installation both horizontal or vertical however inclined
- cash in cast iron HT200
- flanged connections
- 75/33 EEC approved - Class B




| DN | $Q_{max}$ | Qn | Qt | $Q_{min}$ | Loss $Q_{max}$ bar | Lenght | Larg. | Weight | $P_{max}$ bar |
|---|---|---|---|---|---|---|---|---|---|
| | m³/h | | | | | mm | | kg | |
| 50 | 70 | 35 | 10,5 | 2,8 | | 200 | 160 | 11,7 | |
| 65 | 100 | 50 | 15,0 | 4,0 | | | 175 | 12,2 | |
| 80 | 150 | 75 | 22,5 | 6,0 | | 225 | 196 | 14,3 | |
| 100 | 250 | 125 | 37,5 | 10,0 | | 250 | 215 | 17,6 | |
| 125 | 350 | 175 | 52,5 | 14,0 | <1 | | 245 | 18,0 | 16 |
| 150 | 500 | 250 | 75,0 | 20,0 | | 300 | 280 | 26,8 | |
| 200 | 900 | 450 | 135,0 | 36,0 | | 360 | 330 | 38,8 | |
| 250 | 1.200 | 600 | 180,0 | 48,0 | | 450 | 395 | 56,3 | |
| 300 | 1.600 | 800 | 240,0 | 64,0 | | 510 | 450 | 81,7 | |

**TABLE LEGEND COUNTER**:

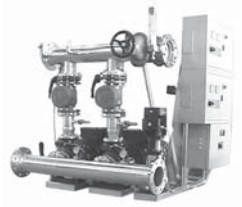
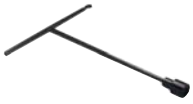
**$Q_{max}$** - maximum flow rate with 1 bar of pressure loss.
**Qn** - flow rate with nominal 0.25 bar pressure drop.
**$Q_{min}$** - flow rate minimum at which there is a maximum error content between ± 5%.
**Qt** - flow rate of transition to the minimum flow rate which there is a maximum error of ± 2% content.

## PULSER ACCESSORY

To connect pumps to hydroeletric plants or automatic devices by reed-switch contact.
Available on request.

## ► FIRE PROTECTION SYSTEMS AND ACCESSORIES

Kit and accessories to create a fire-fighting network.
On request we can provide quotes for projects and wired systems with or without installation.

| Description | | | | |
|---|---|---|---|---|
| Pressurisation boosting for anti-fire service (law UNI 9490 e UNI 10779) plants with only hydrants | SGP - A<br>With vertical electropumps | | Manhole cover hydrant | |
| | SGP - B<br>With horizontal electropumps |  | Operating key for pillar hydrant | |
| | SGP - C<br>with motorpumps and horizontal electropumps | | Threaded connection underground fire hydrant | |
| • Fire hydrant box (DN45-70) with multieffect flexible hose (UNI-EN 67½)<br>• Lock with possibility of seal<br>• Corrosion-resistant polyester coating | | | Operating key for underground hydrant |  |
| One output connection underground fire hydrant | | | One output connection underground fire hydrant | |
| Foot hydrant | | | 2 hydrant threaded delivery port plant | |

## ► GENERATORS

| | Description | Type | |
|---|---|---|---|
| | Super Silenced Electrical Generator (30kVA - 24 KW) with eletronic control unit | GPE | ON REQUEST |

# FERTIGATION

## ► FERTILIZER PRODUCTS

Tank to be connected in a bypass to the conduct in which dissolve irrigation fertilizers, or other chemicals to be mixed with the irrigation water should be dissolved.
Steel body sandblasted and epoxy painted or galvanized female threaded connections
Maximum operating pressure: 8 bar - 12 bar hatches approved.

| VERTICAL GALVANIZED | | HORIZONTAL PAINT | |
|---|---|---|---|
| Code | Capacity lt | Code | Capacity lt |
| AFR001 | 80 | | |
| AFR002 | 120 | AFR010 | 120 |
| | | AFR011 | 200 |
| | | AFR014 | 400 |

## ► IMJECTORS AND TURBIN MIXERS

# VENTURI INJECTORS

### DESCRIPTION AND OPERATION

Fertigation is the technique used to inject liquid or resolved fertilizers into water. This technique is increasingly used in agriculture, in particular in localized micro-irrigation systems. Venturi injectors operate on the principle of vacuum suction created by an advanced Venturi complex and, since there are no moving parts, continuous and systematic up-keeping is not needed. We have a wide range of injectors available, built with various materials and diameters in order to meet the need for injecting fertilizers and acids used in agriculture at a high injection power.
This allows to manage irrigation systems with potentially immeasurable flow rates and thus to centralize the fertilization of wide areas as well. Our injectors operate with the water energy available in the system and often work without needing an external source of energy, according to the Venturi principle of vacuum suction.
The increase in water flow speed, given to the narrowing of the pipeline, and the following widening of the same pipeline give rise to a vacuum which makes sure the fertilizer is sucked.

**The Venturi system operates with:**
a) a pressure differential between the water entering the injectors and the water and fertilizer leaving the irrigation system.
This pressure differential is between 7-75% according to the injector model.
b) A minimum guaranteed flow rate depending on the injector model.
On request we can provide the tables that determine the sucking capacity of each Venturi model and the minimum.

### ADVANTAGES

• Low up-keeping costs • Low investment and installation costs • There is no need for any additional external energy source • Manufactured from high quality materials that withstand all allowed fertilizers and acids.

### VENTURI KIT

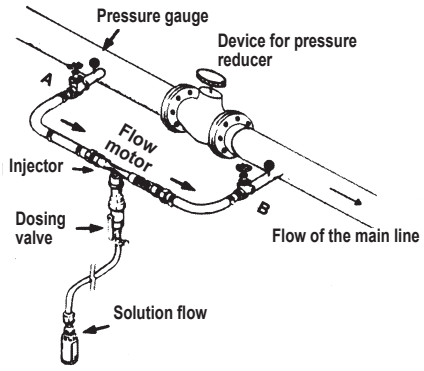
| Code | Description | | Ø connection | Range of suction fertilizer l/h |
|---|---|---|---|---|
| OIV010 | Suction kit contains , Venturi, flow measurement, clear vinyl pipe, strainer and 2 clamps(1) | | ¾” | 12 ÷ 162 |
| OIV011 | | | 1” | 90 ÷ 460 |
| OIV012 | | | 1”½ | 105 ÷ 1.020 |
| OIV013 | | | 2” | 180 ÷ 1.100 |
| OIV020 | By pass and Venturi fitting complete kit for hydrocyclon (**see hydrocyclons on page112**) | | ¾” | 12 ÷ 162 |
| OIV022 | | | 1” | 90 ÷ 460 |

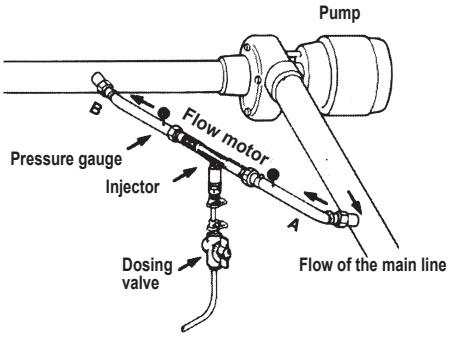
(1) PP standard injector, PVDF available on request

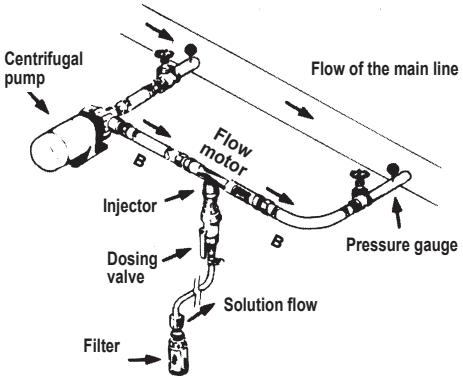
| COMPOSITION KIT COMPLETE FITTINGS AND BYPASS VENTURI | | |
|---|---|---|
| Code assembled kits | **OIV020** | **OIV022** |
| Venturi, flow measurement, clear vinyl pipe, strainer and 2 clamps | OIV010 | OIV011 |
| Backnut valve FF ¾" | FVIA007 | - |
| Backnut valve MF ¾" | FVIA020 | - |
| Backnut valve MF 1" (n°2 pieces) | - | FVIA021 |
| Elbow thr. MF ¾" | RGO211 | - |
| Elbow MF thr. 1" (n°2 pieces) | - | RGO172 |
| Elbow F 20 x ¾" | RGOA082 | - |
| Fitting F 20 x ¾" | RGFA023 | - |
| Reduced socket 1" x ¾" | - | RMR052 |

### HOW TO CHOOSE THE CORRECT INSTALLATION

To identify the suitable model it is necessary to know the pressure of inlet and outlet water upstream and downstream of the injector. If this pressure difference is greater than or equal to 20% you can use the by-pass installation method (diagram 1), if it is less than 20% you will have to install the injector in series with an auxiliary pump (diagram 2 or 3).




## PROPORTIONAL FERTILIZER DOSMATIC

**DESCRIPTION:** DOSMATIC is a proportional injector of fertilizers, acids or other products soluble in water normally used in agriculture, that doesn't require the use of electricity.
It is a user friendly instrument that is very carefully built.
The percentage of liquid to be injected on line is set through a ring that can be managed externally, even when it is working.

### ADVANTAGES

- All models are made from 21st century materials, using cutting edge technology and are highly reliable and easy to use.
- Outside ratio adjustment on the Advantage models means users can vary chemical proportions even while the unit is in operation.
- Quick mount brackets and elbows allow fast installation and easy maintenance, Dosmatic's wide range of models means you have just the right injector for every job. No chemical waste means greater profit for every user
- Models are engineered with the ability to inject a wide range e of chemicals, including acids and disinfectants, provides.

**A 10**

**A 30 - A 45**

| TECHNICAL DATA - DOSMATIC INJECTORS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Code | Model | Flow Rate l/m | | Working pressure atm | | Percentage of injection | | Connection Ø |
| | | min | max | min | max | min | max | |
| FER300 | A 10 | 0,1 | 45,4 | 0,4 | 9,5 | 0,5 | 2,5 | ¾" |
| FER301 | A 30 | 0,6 | 114,0 | 0,4 | 6,9 | 0,2 | | 1" |
| FER302 | A 45 | 1,9 | 170,0 | | | | | 1"¼ |

## INJECTION FERTIC PUMP

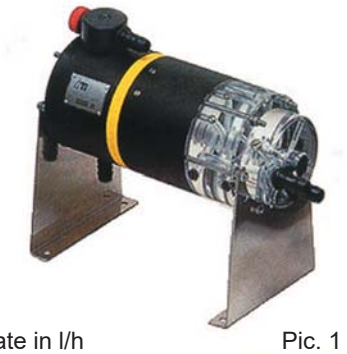
| Code | Model |
|---|---|
| FER071 | Fertic |

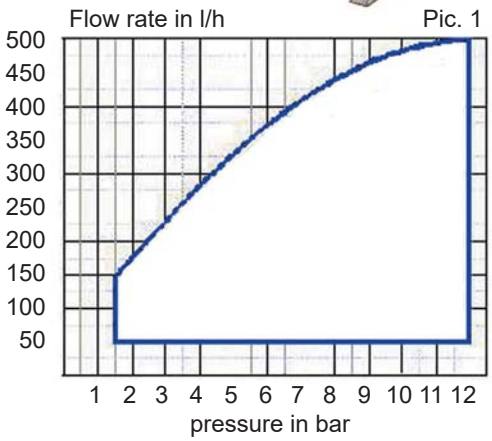
### DESCRIPTION

Dosing pump for the addition of hydraulic liquid fertilizers or soluble in the irrigation water.
Fully compact without other elements in addition to the external connection pipes.
It produces no loss of pressure in the irrigation network.
By means of a controller can automate it, opening or closing a solenoid valve.

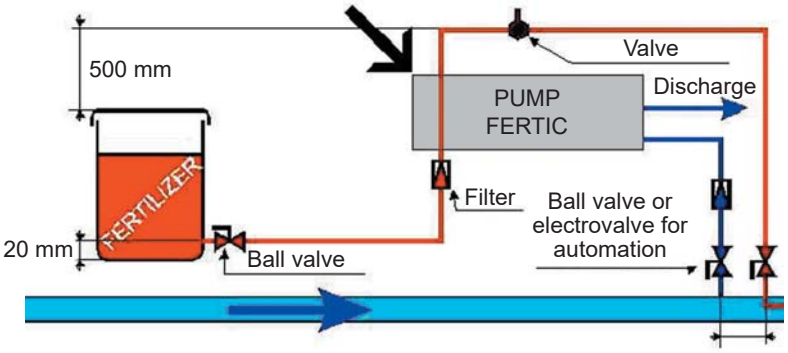
### TECHNICAL SPECIFICATIONS

- The injection capacity is highlighted in the yield curve (see Figure 1).
- The working pressure is between 1 and 12 bar.
- Water consumption is equal to two times the amount of fertilizer solution injected.
- in each cycle, the hydraulic pump injects 0.2 liters.
- The material in contact with the liquid to be injected is propylene and viton.
- Dimensions: 335 x 325 x 425 mm.
- Weight: 3 kg.
- Resistant to the chemicals used in agriculture.






### INSTALLATION DIAGRAM RECOMMENDED




## INJECTION ECOFERTIC PUMP

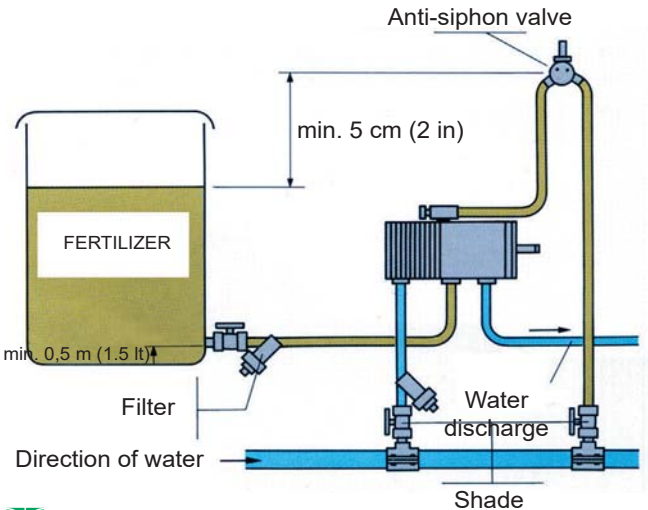
| Code | Model |
|---|---|
| FER076 | Ecofertic |

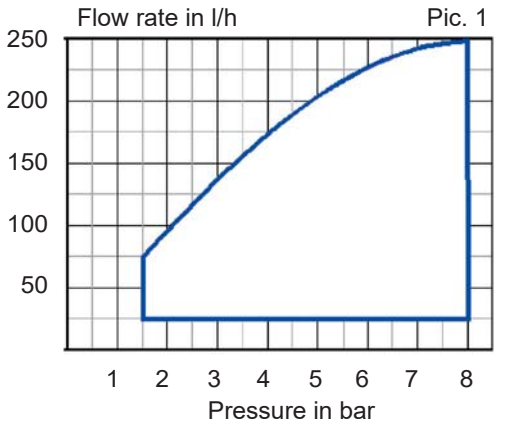
### DESCRIPTION

Hydraulic pump for dosing liquid or soluble fertilizers dissolution for their injection into the irrigation system.
It is completely compact, with no other outer elements than the connection hoses, and it does not cause any pressure loss in the irrigation pipes.
It can be automated by means of a controller which acting on an electrovalve, opens and closes the entrance of the operating water.

### TECHNICAL SPECIFICATIONS

- Injection: see graph (Pic. 1).
- Working pressure: 1-8 bar (14-116 PSI).
- Water consumption: twice the injection of fertilizer.
- Materials in contact with the fertilizer: polypropylene (PP) and viton.
- Size: 335 x 325 x 425 mm.
- Weight: 3 Kg.
- Resistant to agrochemical products.



# DOSING PUMPS

## HORIZONTAL MOUNTING (DIAPHRAGM) METERING PUMPS

**FEATURES:**

- Horizontal mounting;
- Microprocessor;
- Level control;
- Mechanical adjustment of the volume of the single injection;
- PVDF body with manual air bleed pump - hydraulic parts (pump, injection valve, filter, electric injection hose,) PVDF - other materials upon request;
- With digital display.

| DATA HORIZONTAL INSTALLATION | | | | | |
|---|---|---|---|---|---|
| Model | Pmax bar | Qmax l/h | Single injection CCmax | Injetion pipe PVDF | Suction pipe |
| AMS analogic and AMS digital | 25 | 5 | 0,70 | 4 x 6 | |
| | 15 | 10 | 1,40 | | |
| | 7 | 20 | 2,80 | 6 x 8 | |
| | 3 | 40 | 5,60 | 8 x 10 | 8 x 12 |
| K analogic and KMS digitale | 10 | 5 | 0,46 | 4 x 6 | |
| | 8 | 8 | 0,74 | | |

**ANALOGIC**

| ASM E K ANALOGIC PUMP SERIES | | | | |
|---|---|---|---|---|
| Model | CL | PV | PVM | IC |
| Dosing | Constant | Constant/proportional | Constant/proportional | Constant/proportional |
| Regulation n° injections | 0 ÷ 100% | 0 ÷ 1% 0 ÷ 10% 0 ÷ 100% | 0 ÷ 10% 0 ÷ 100% | 0 ÷ 100% |
| Digital signal | - | Sì | Sì | - |
| Signal 4 ÷ 20 mA | - | - | - | Sì |
| Functions | Divider n. injection (1 ÷ 100) | Divider input pulses (1 ÷ 1000) | Divider (1 ÷ 100) and multiplier (1 to 10) Input pulse | - |
| Alarm output level | - | K Series optional | K Series optional | K Series optional |

| AMS DIGITAL PUMPS | | | |
|---|---|---|---|
| Model | MF | PH | RH |
| Dosing | Constant/proportional | Proportional | Proportional |
| Input flow sensor | Yes | - | - |
| Input stand-by | Yes | - | - |
| Alarm exit | Yes | Optional | Optional |
| Alarm exit | • Multifunction (constant - divider - multiplier - PPM - batch - Volt - mA -% - ml / q) • System recovery shots • Sleep mode • Maintenance dosage-work | Reading / adjusting pH - 0 to 14 pH (probe not included) | Read / Redox regulation - 1 to 1000 mV (probe not included) |

| KMS DIGITAL PUMPS | |
|---|---|
| Model | DC |
| Dosing | Constant |
| Inlet stand-by | Yes |
| Alarm exit | Yes |
| Function | Constant (lph - sph - spm) |

**DIGITAL**

| CODES DOSING PUMPS HORIZONTAL INSTALLATION | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Series | Type | l/h - bar | | | | Series | Type | l/h - bar | | | |
| | | 5 - 25 | 10 - 15 | 20 - 7 | 40 - 3 | | | 5 - 25 | 10 - 15 | 20 - 7 | 40 - 3 |
| AMS analogic | CL | FER861 | FERD100 | FERD101 | FERD103 | AMS digital | MF | FERD124 | FERD125 | FERD126 | FERD127 |
| | PLUS | FERD104 | FERD105 | FERD106 | FERD107 | | PH | FERD128 | FERD129 | FER860 | FERD130 |
| | | | | | | | RH | FERD131 | FER832 | FERD133 | FERD134 |
| | | 5 - 10 | 8 - 8 | | | | | 5 - 10 | | | |
| K analogic | CL | FERD116 | FERD117 | | | KMS digital | DC | FERD147 | | | |
| | PLUS | FERD118 | FERD119 | | | | | | | | |

**METERING PUMPS VERTICAL MOUNTING (DIAPHRAGM)**

**FEATURES:**
- Vertical mounting;
- Microprocessor;
- Electronic adjustment of the flow rate;
- Hydraulic parts
  (pump, injection valve, filter, electric pipe injection) in PVDF.

**T - ANALOGIC**

| TECHNICAL DATA PUMPS VERTICAL INSTALLATION | | | | |
|---|---|---|---|---|
| Series | Pmax bar | Qmax l/h | Single injection CCmax | Pipe PVC |
| T analogic | 20 | 5 | 0,7 | 4 x 8 |
| | 5 | 15 | 2,1 | 6 x 8 |
| | 4 | 20 | 2,8 | |
| | 3 | 30 | 4,2 | 8 x 12 |
| | 1 | 50 | 7,0 | |
| TMS digital | 20 | 5 | 0,7 | 4 x 8 |
| | 5 | 15 | 2,1 | 6 x 8 |
| | 4 | 20 | 2,8 | |
| | 3 | 30 | 4,2 | 8 x 12 |
| | 1 | 50 | 7,0 | |

| PUMP "T" ANALOGIC | |
|---|---|
| Model | Description |
| TCO | Constant pump with adjustable flow rate |
| TCL | Constant pump with level control and flow regulation |
| **POMPE "TMS" DIGITALI** | |
| Model | Description |
| DC | Digital constant pump, remote control, alarm output and level control. |
| MF | Pump digital multifunction (constant - divider - multiplier - PPM - batch - Volt - mA -% - ml / q), remote control, flow sensor input, alarm output and level control, system recovery shots, pause work and maintenance dosage |
| PH• | Proportional pump driven by and pH regulation (0 ÷ 14 pH), remote command and control level |
| RH• | Proportional pump driven by regulation and redox potential (0 to 1000 mV), remote command and control level |

• without probes

| CODE DOSATOR PUMPS VERTICAL INSTALLATION | | | | | | |
|---|---|---|---|---|---|---|
| Series | Type | l/h - bar | | | | |
| | | 5 - 20 | 15 - 5 | 20 - 4 | 30 - 3 | 50 - 1 |
| T analogic | TCO | FERD401 | FERD402 | FERD403 | FERD404 | FERD405 |
| | TCL | FERD409 | FERD410 | FERD411 | FERD412 | FERD413 |
| Series | Type | 5 - 20 | 15 - 5 | 20 - 4 | 30 - 3 | 50 - 1 |
| TMS digital | DC | FERD228 | FERD420 | FERD421 | FERD422 | FERD423 |
| | MF | FERD444 | FERD445 | FERD446 | FERD447 | FERD448 |
| | PH | FERD237 | FERD239 | FERD431 | FERD245 | FERD433 |
| | RH | FERD246 | FERD440 | FERD441 | FERD442 | FERD443 |

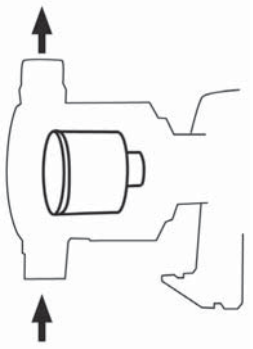
**TMS - DIGITAL**

# DOSTEC DOSING PUMP

**DESCRIPTION**

The piston of the Dostec dosing pump guarantees high efficiency and precision for the injection of liquid. This series allows multiple solutions for the liquid injection, following the head choise.
The heads available are from 25 to 500 l/h for the DOSTEC 40 series and from 500 to 1000 l/h for the DOSTEC 50 (membrane) series.
The DOSTEC dosing pumps are made by materials resistant to almost all liquids used in the water net dosing process, for example: food industry, textile, chemical, water treatment, agriculture etc.
The injection dosage can be adjusted without the stop of the pump, from 0% to 100% of its capacity (it is important to remember that the pump is not designed to work dry).
For particular applications please contact the technical department of Scarabelli Irrigazione.

## DOSTEC PISTON



| DOSTEC 40 PISTON | | | |
|---|---|---|---|
| Code | Flow l/h | Pressu-re bar | Motor |
| FER050 | 25 | 15,0 | Three phase |
| FER051 | 50 | 15,0 | |
| FER052 | 100 | 15,0 | |
| FER053 | 200 | 11,0 | |
| FER054 | 300 | 7,0 | |
| FER055 | 500 | 4,5 | |
| FER056 | 25 | 15,0 | Single phase |
| FER057 | 50 | 15,0 | |
| FER058 | 100 | 15,0 | |
| FER059 | 200 | 11,0 | |
| FER060 | 300 | 7,0 | |
| FER061 | 500 | 4,5 | |
| FER047 | 200 | 3,5 | 12V 300W |
| FER043 | 200 | 10,0 | 12V 300W |
| FER044 | 300 | 6,0 | |
| FER045 | 500 | 4,5 | |

| DOSTEC 50 PISTON | | | |
|---|---|---|---|
| Code | Flow l/h | Pressure bar | Motor |
| FER062 | 500 | 11,0 | Three-phase |
| FER063 | 750 | 7,5 | |
| FER064 | 1.000 | 5,5 | |

N.B. on request singlephase or diaphram

**TECHNICAL DATA DOSTEC 40**

**HEAD MATERIAL**

- Piston — PEUAPM / ceramic•
- Retention — FPM
- Cilinder — PP / AISI 316• / PVDF• / PTFE•

**VALVE MATERIAL**

- Body — PP / AISI 316• / PVDF• / PTFE•
- Ball — glass / borosilicate glass o• / AISI 316•
- O-ring — FPM

**Motore**

- Three-phase — 230/400 V 50Hz
- Sigle-phase — 230 V 50 Hz
- Power — 0.37 Kw (0,5 Hp)
- Protection — IP-55

**Weight**

- About 10 Kg

**TECHNICAL DATA DOSTEC 50**

**HEAD MATERIAL**

- Piston — PEUAPM / AISI 316• / PVDF•
- Retention — FPM
- Cilinder — PP / AISI 316• / PVDF•

**VALVE MATERIAL**

- Body — PP / AISI 316• / PVDF•
- Ball — glass / borosilicate glass • / AISI 316•
- O-ring — FPM

**Materials**

**Body**

**Motor**

- Three-phase — 230/400 V 50Hz
- Sigle-phase — 230 V 50 Hz
- Power — 0.75 Kw (1 Hp)
- Protection — IP-55

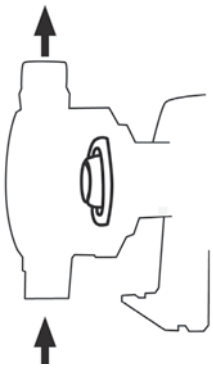
**Weight**

- About 20 Kg

• On request specific solutions for injection

## DOSTEC DIAPHRAM

The outer layer of the diaphram (the one in contact with the solutions to be injected) is in PTFE (1), while inside there is a layer of elastomer reinforced with polyester fibers (3) and a metal core (2). This combination imparts great strength and durability while allowing to work at high pressures.



| DOSTEC 40 DIAPHRAM | | | |
|---|---|---|---|
| Code | Flow l/h | Pressure bar | Motor |
| FER640 | 80/100 | 10 | Threephase |
| FER642 | 160/200 | 8 | |
| FER643 | 255/300 | 5 | |
| FER632 | 15/25 | 15 | Singlephase |
| FER633 | 30/50 | 15 | |
| FER634 | 80/100 | 10 | |
| FER636 | 160/200 | 8 | |
| FER637 | 255/300 | 5 | |
| FER647 | 15/25 | 15 | 12V 130W |
| FER648 | 30/50 | 15 | |
| FER649 | 80/100 | 10 | |
| FER650 | 160/200 | 5 | |
| FER651 | 160/200 | 8 | 12V 300W |
| FER652 | 255/300 | 5 | |

**DOSTEC 40 TECHNICAL DATA**

**HEAD MATERIAL**

- Diaphram PTFE
- Base PP / AISI 316• / PVDF• / PTFE•
- Cilinder PP / AISI 316• / PVDF• / PTFE•

**VALVE MATERIAL**

- Body PP / AISI 316• / PVDF• / PTFE•
- Ball glass / borosilicate glass • / AISI 316•
- O-ring FPM

**Motor**

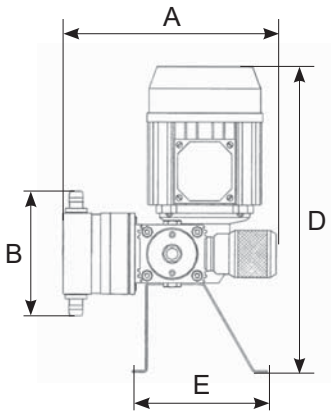
- Three-phase 230/400 V 50Hz
- Sigle-phase 230 V 50 Hz
- Power 0.37 Kw (0,5 Hp)
- Protection IP-55

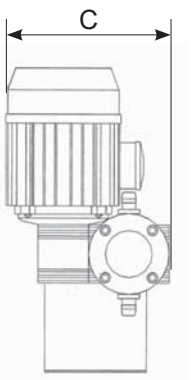
**Weight**

- About 10 Kg

• On request

## DIMENSIONS




| DIMENSION MM PISTON | | | | | |
|---|---|---|---|---|---|
| Model | A | B | C | D | E |
| Dostec 40 | 320 | 154 | 195 | 370 | 155 |
| Dostec 40 (500 l/h) | 320 | 175 | 205 | 370 | 155 |
| Dostec 50 | 415 | 230 | 204 | 440 | 241 |

| DIMENSION MM DIAPHRAM | | | | | | |
|---|---|---|---|---|---|---|
| Model | l/h | A | B | C | D | E |
| Dostec 40 | until 100 | 280 | 154 | 195 | 370 | 155 |
| | until 200 | 285 | 184 | 195 | 370 | 155 |
| | until 300 | 285 | 204 | 207 | 370 | 155 |

# MULTIFERTIC ELECTRIC DOSING PUMP

(till 4 modules injection piston or diaphram)

## DESCRIPTION

The MULTIFERTIC dosing pumps are heavy duty, high precision pumps for chemical products, made up of one driving module and 1 to 4 injection modules of 50 to 500 l/h (15 to 150 GPH). Several injection modules can be connected in the same injector to dose different products (indipendent injection) or to increase the injectio flow.

By increasing the number of modules in the same injector, a higher flow regularity is obtained, whereby in the 4 modules model an actually continuous flow is obtained.

By acting manually on the control knob of a single injection module the injection capacity can be adjusted in a very precise way up to a minimum of 10% of the module maximum flow rate or acting until this element is closed down without damaging it.

MULTIFERTIC 4 modules

MULTIFERTIC 2 modules

MULTIFERTIC 12V

## TECHNICAL FEATURES

- 3-phase driving module: 230/400V - 50hz
- Single-phase driving module: 230V - 12V

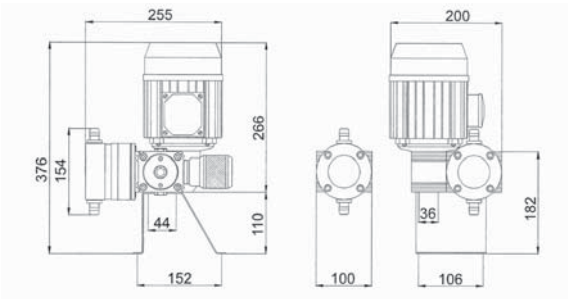
| Motor | PISTON | | | DIAPHRAM | | |
|---|---|---|---|---|---|---|
| | Code | Flow l/h | Pressure bar with 1 module | Code | Flow l/h | Pressure bar with 1 module |
| Three-Phase | FER001 | 50 | 15 | FERM002 | 37/50 | 10 |
| | FER002 | 100 | 15 | FERM003 | 86/100 | 10 |
| | FER003 | 200 | 8 | FERM004 | 160/200 | 6 |
| | FER004 | 300 | 5 | FERM005 | 247/300 | 4 |
| | FER005 | 500 | 3 | | | |
| Single-Phase | FER006 | 50 | 15 | | | |
| | FER011 | 100 | 15 | FERM012 | 86/100 | 10 |
| | FER012 | 200 | 8 | FERM013 | 160/200 | 6 |
| | FER013 | 300 | 5 | FERM014 | 247/300 | 4 |
| 12V CC 130W | FER026 | 50 | 10 | FERM027 | 37/50 | 10 |
| | FER027 | 100 | 5 | FERM026 | 86/100 | 5 |
| | FER028 | 200 | 3 | FERM025 | 160/200 | 3 |
| 12V CC 300W | FER022 | 100 | 14 | FERM022 | 86/100 | 10 |
| | FER023 | 200 | 7 | | | |
| | FER024 | 300 | 4 | FERM024 | 247/300 | 4 |

| MULTIFERTIC MODULES CODES | | | | |
|---|---|---|---|---|
| DIAPHRAM | | A PISTON | | |
| Code | $Q_{max}$ lt | Code | $Q_{max}$ lt | |
| FERM031 | 50 | FER031 | 50 | |
| FERM032 | 100 | FER032 | 100 | |
| FERM033 | 200 | FER033 | 200 | |
| | | FER034 | 300 | |
| | | FER035 | 500 | |

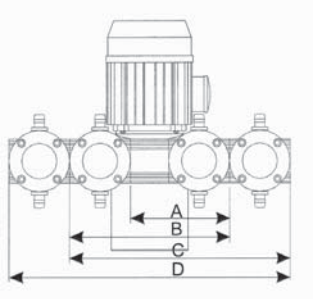
When the injection modules are more than one of the maximum allowable the pressure in the hydraulic line decreases in different ways depending on the power of the engine:

- in the case of motors supplied with alternating power (AC): Pmax = 4,600 / (total amount of flow of the modules used)
- in the case of engines fueled with DC 12V DC: Data shown in the table above will decrease from 25% (in case of using two modules) up to 40% (in case of use of 4 modules).

The injection modules of 500 l / h can be mounted in the maximum number of two for the engine.




| Width (mm) - Weight (kg) | | | |
|---|---|---|---|
| Module | | Width | Weight |
| 1 | A | 200 | 12,0 |
| 2 | B | 265 | 14,5 |
| 3 | C | 365 | 17,0 |
| 4 | D | 465 | 19,5 |




• Available on request;

# ELECTRIC PISTON PUMP FOR DOSING ELETTROFERTIC

## DESCRIPTION

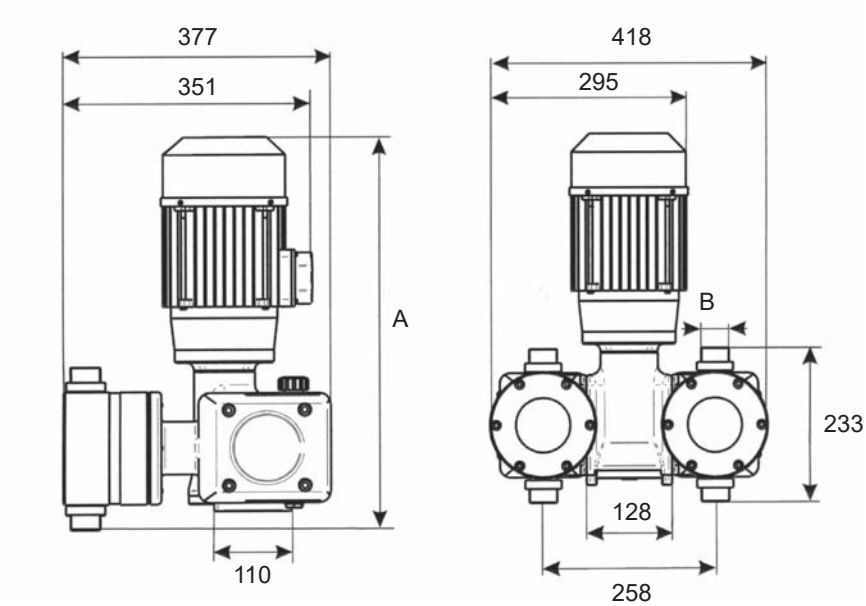
The ELETTROFERTIC 2000 metering pumps consist of a three-phase motor and one or two injection modules of 500, 750 or 1000 l / h with electronic regulation by an inverter.

## TECHNICAL SPECIFICATIONS

**Engine:** Three-phase 230/400 V 50Hz ● Power 0.75 Kw (1.0 Hp) - low pressure Series / 1.1 kW (1.5 HP) - high pressure Series ● IP-55 protection

**Materials:** Piston PEUAPM (ultra high molecular weight polyethylene) / AISI 316 ● Cylinder PP / PVDF • / • PTFE / AISI 316 ● Retention FKM

| TWO MODULES/HIGH PRESSION/1,5 HP | | | | |
|---|---|---|---|---|
| FER670 | 1.000 | 500 | 500 | 12,0 |
| FER671 | 1.250 | 750 | 500 | 8,0 |
| FER672 | 1.500 | 750 | 750 | 8,0 |
| FER673 | 1.500 | 1.000 | 500 | 6,0 |
| FER674 | 1.750 | 1.000 | 750 | 6,0 |
| FER675 | 2.000 | 1.000 | 1.000 | 6,0 |




| Dimension | Flow l/h | |
|---|---|---|
| | 500 | 750-1000 |
| A (mm) | 490 | 520 |
| B (BSP) | ¾" | 1"¼ |

| Weight | Flow l/h | |
|---|---|---|
| Modules | 500 | 750-1000 |
| 1 | 31 Kg | 34 Kg |
| 2 | 32 Kg | 45 Kg |

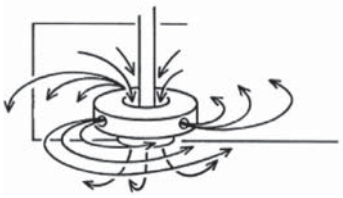
• Available on request;

# TURBIN MIXER

## DESCRIPTION

• This is an agitator exclusive design with a turbine with 6 holes. Three are located in radial position for imparting a centrifugal motion to the liquid, while the other three are located in axial position to stir the bottom of the container;
• The turbine is dismantled, without sharp edges for increased safety;
• The axis of direct transmission is in stainless steel, of variable length depending on the model;
• Possibility of working with the hydraulic system.

TURBINE WITH STIRRING TWO-WAY



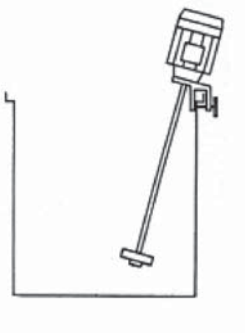
In function of the type of energy used to impart rotary motion we have two types of turbine agitators: electrical and hydraulic (to be connected to the sockets of the hydraulic system of the tractor)

## SHAKERS TURBINE ELECTRIC

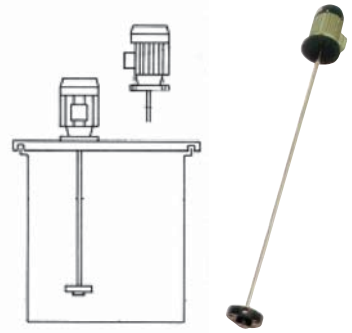
Each model, as seen from the pictures below, can be equipped with pliers or flange. The agitator is designed and constructed to operate in a liquid medium, and therefore must not be rotated to dry.
The agitators are supplied unassembled for better transport and storage.

| Rod mixer - mt | h - mm | j - mm |
|---|---|---|
| 1,5 ÷ 2,0 | 300 | 200 ÷ 500 |
| 1,5 | | |
| 1,0 ÷ 1,3 | | 100 ÷ 300 |
| 1,1 | 150 | 50 ÷ 150 |
| 0,6 | | |

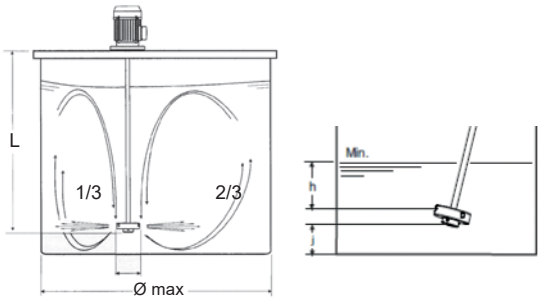
WITH CLAMP



FLANGE



DIMENSIONS




| CODE AND CHARACTERIST TURBIN MIXER | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Flange | Clamp | Voltage | Power W | rpm | Shaft lenght in mm | Ø Turbin mm | Ø max mt | Max liquid $m^3$ |
| FER160 | - | Threephase | 550 | 950 | 2.000 | 180 | 1,9 | 7,0 |
| FER161 | | | | | 1.800 | | | 6,0 |
| FER166 | FER177 | | 750 | 1.400 | 1.500 | 150 | 2,7 | 10,0 |
| FER167 | FER178 | Singlephase | | | | | | |
| FER168 | FER179 | Threephase | 370 | | 1.300 | 130 | 1,5 | 3,0 |
| FER169 | FER180 | | | | 1.000 | | | 2,3 |
| FER170 | FER181 | Singlephase | | | 1.300 | | | 3,0 |
| FER171 | FER182 | | | | 1.000 | | | 2,3 |
| FER172 | FER183 | 12V CC• | 300 | | 1.300 | 113 | 1,2 | 1,8 |
| FER173 | FER184 | | | | 1.000 | | | 1,5 |
| FER174 | - | Threephase | 185 | | 1.100 | 90 | 0,8 | 0,6 |
| FER175 | | Singlephase | | | | | | |
| FER176 | | 12V CC | 130 | | | | | |

• On request

## PANELS FOR TURBIN MIXER

| Code | Description |
|---|---|
| EQE520-1 | Panel for 1 singlephase turbin mixer |
| EQE529 | Panel for 2 singlephase turbin mixer |
| EQE526-1 | Panel for 1 threephase agitator to control programmer |
| EQE530 | Panel for 2 threephase agitator to control programmer |

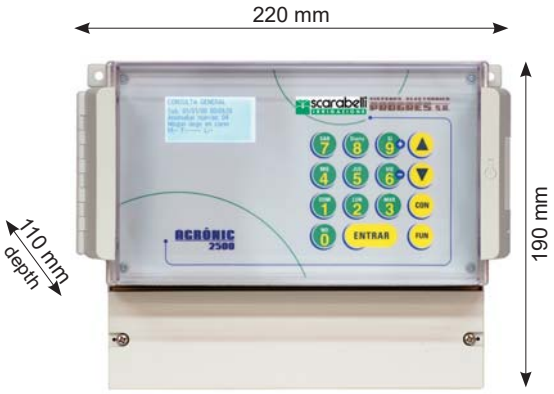
**DESCRIPTION:** Electronic control panel • Input connection 1 ~ 50/60 Hz 230V ± 10% (SINGLE VERSION) • Input voltage 3 ~ 50/60 Hz 400V ± 10% (PHASE VERSION) • Very low voltage input for pressure switch or float switch • Very low voltage input for external control from 3 level • Sensor suitable for conductive liquids non flammable • Selector for the operation of filling / emptying • Internal sensor sensitivity regulator • Selector for the operation of the engine in AUTO-OFF-MANUAL • Green LED for power on • Green led engine running • Red led for water level alarm • Red led for motor protection • Line contactor 400V in AC3 (PHASE VERSION) • Adjustable amperometric protection • Time adjustable 0-5 sec • Auxiliary protection fuses • Motor protection fuse • Alarm output with changeover contact 16A 250V resistive load • Main switch with door lock lockable in OFF position • Prepared for the insertion of a capacitor (not included) (SINGLE VERSION) • Thermoplastic box • Output with cable • Degree of protection IP55.

**OPERATING LIMITS: Ambient temperature: -5 to +40 °C • Relative humidity 50% at 40°**

N.B.: the probes are to be considered optional

## ► CONTROLLERS

### AGRONIC 2500




Complete fertigation controller, entirely configurable with great potential to use and with many extension and communication possibilities.
Equipped to control irrigation, fertilization, pumping, filter cleaning and malfunctions detection, providing detailed chronological records of events and totals.
Models have 9, 18 and 27 configurable outputs and 6 digital inputs on the base, having also several versions and options.
Extensions are available to accommodate readings from 2 analog sensors on the own base or by using the AgroBee radio system to have more inputs and outputs, reaching up to 30 irrigation sectors, 2 pumps, 4 fertilizers and mixers, 1 fertilizer general, 9 filters, 20 digital sensors, 10 meter sensors, and 10 analog sensors.
Programming according to time and volume for both irrigation and fertilization, as well as filter cleaning, with the option to have independent working actions for each program.
Starting conditions and irrigation or fertilizer units can be set using the climate or crop-based sensors.
Remote management via SMS messages, as well as PC connections to three users or to an Irrigation Community software.
Basic model is completely scalable, very easy to use, and has an additional list of options to become a high-performance model.

**PROGRAM PC**: thank to the Agronic PC is possible to manage the equipment by using a personal computer. There are three possibilities for different connections: Cable for a local control or remote media - radio for distances from 1 to 20 km - via modem for long distances even in different countries.

With the Pc Agronic you can get detailed information from the programmer (register, problems, situation of irrigation etc) and modify the parameters, programs, levels, etc. The connection may be permanent even with other programmers as Agronic 4000

The Agronic 2500 handles the communication with three users; information edited by a user is automatically updated in the other two. The multiple connection equipment can be contemporary and permanent, depending on the type of setup. It is useful to interact, for example, with the owner, the manager of the sectors and the installer

| CODE AGRONIC 2500 | | | | | | |
|---|---|---|---|---|---|---|
| Sectors | 220/24 Vac• | 12 Vcc | Latch 2 fili•• | Latch 3 fili•• | 12 V Double tension••• | 12 V With charger |
| 9 | OPG2500 | OPG2506 | OPG2512 | OPG2518 | OPG2524 | OPG2530 |
| 18 | OPG2501 | OPG2507 | OPG2513 | OPG2519 | OPG2525 | OPG2531 |
| 27 | OPG2502 | OPG2508 | OPG2514 | OPG2520 | OPG2526 | OPG2532 |
| **OPTIONAL AGRONIC 2500** | | | | | | |
| 9 | OPG2503 | OPG2509 | OPG2515 | OPG2521 | OPG2527 | OPG2533 |
| 18 | OPG2504 | OPG2510 | OPG2516 | OPG2522 | OPG2528 | OPG2534 |
| 27 | OPG2505 | OPG2511 | OPG2517 | OPG2523 | OPG2529 | OPG2535 |

• Basic version with 12 Vdc power supply included 220/12 V 2A and transformer 220/24 V 50 VA
•• with solar supply inclued
••• basic version with 12 Vdc transformer including 220/24 V 50 VA

| OPTIONAL AGRONIC 2500 | |
|---|---|
| Code | Description |
| FER2500 | Control diesel motor |
| FER2501 | Option PLUS option that offers a significant increase in performance of the basic model, which is activated at the factory or subsequently to new requirements in the system. |
| FER2502 | PC program (you have to enjoy the use of a cable connection or modem or radio) |
| FER2503 | SMS messages and / or connection to PC with GSM / GPRS modem included |
| FER2504 | USB port for PC connection close |
| FER2505 | Radio connection with a PC which in turn requires the radiomodem Agronic |
| FER2506 | Radiomodem Agronic to install in PC |
| FER2507 | Connection with AgroBee |
| FER2508 | 2 analog revenue of needing ‘option PLUS |
| FER2509 | Regulator solar panel with battery 7 A |
| FER2510 | Solar panel 5W 12V with support |
| FER2511 | Solar Panel 10W 12V with support |

## AGRONIC 4000

**DESCRIPTION:** This unit is for the control of the irrigation system, fertilisation, mixers, pumps and the cleaning of filters, with detection of malfunctions and full data display. Possibility of programming by time and volume, both in irrigation and fertilization as in filter cleaning, with possibility of mixed performance (independent for each sub-program). **PROGRAMS:** 40 sequential programs, with 12 sub-programs in every sequence (total 480), and possibility of linking programs in order to carry out sequences of 24, 36, or more sub-programs • programming can be for daily or weekly action or by frequence and with various starts every day • complete control of instantaneous flow of each irrigation counter, with programming of the expected flow in each sector and tolerance percentage both for excess or lack. • manual starting and stopping of oulets and programs • irrigation program starting by input connected to an external sensor with two indipendent inlets. **FERTIGATION:** From 0 up to 4 configurable fertilizers, in indipendent tanks • pre-fertigation and post-fertigation indipendent values for each program and separation values between the injection of 2 contrasting fertilizers • the time or volume of each fertilizer to be applied is indipendently controllable for each sub-program • the use or not of mixers with pre-mixing, intermittent or continuous mixing is configurable • fertilizers can be applied in two different ways: **a)** in series (a kind of fertilizer after the other with only one injector and, if we work by volume, with only one counter. In proportional fertigation, indipendent proportions for each fertilizer). **b)** in parallel (all kinds of fertilizers simultaneusly with an injector each, if we work by volume, with a counter as well for each type. In proportional fertigation, independent proportions for each kind of fertilizer and sub-program) • instant flow reading. **PUMPING:** the unit can manage up to 3 electric engines or a diesel engine plus two electric ones (for diesel engines, the unit carries out a complete control with various starting attempts, automatic stopping, indication of breakdowns, etc..) • irrigation outlets are assigned to the engines and for each sector one or more engines can be activated • to avoid problems of water hammer in the motor, special timing sequences are provided between the opening of the sector valves and the starting of the motor, and between its stopping and the closing of the valves. **CONFIGURABLE EXITS FOR THE MANAGEMENT OF:** fertilizer mixers including pre-mixing, continuous and intermittent mixing;

• configurable number of filters with variable washing times. The washing sequence can be started by the pressure difference and/or the time or volume of water circulation. **DIGITAL INLETS CONFIGURABLE FOR:** irrigation volumetric counter, fertiliser volumetric counter, differential pressure gauge for filter cleaning, temporary breakdown, general breakdown, conditioning stop and programme starting • finding recordable breakdowns through corresponding sensors • carrying out the startings set for external sensors • setting a delay time for carrying out a signal.

**DISPLAY:** • a lightened 80 character alphanumeric LCD screen • aside there is a waterproof keyboard with 22 function keys • prepared for printing programs, irrigation control, alarms, etc. and it is provided with counters for calculating time, water flow and fertilizer applied for each sector.

| Code | Sector | Power | Outlet |
|---|---|---|---|
| OPG1154 | 16 | 220 Volt | 24Vac |
| OPG1000 | 24 | | |
| OPG1102 | 32 | | |
| OPG1106 | 48 | | |
| OPG1110 | 64 | | |
| OPG1114 | 80 | | |
| OPG1118 | 96 | | |
| OPG1153 | 16 | 12 Vcc | 12 Vcc |
| OPG1155 | 24 | | |
| OPG1101 | 32 | | |
| OPG1105 | 48 | | |
| OPG1109 | 64 | | |
| OPG1113 | 80 | | |
| OPG1117 | 96 | | |

| OPZIONI AGRONIC 4000 | |
|---|---|
| FER960 | Motor diesel |
| FER961 | Dual voltage for generator |
| FER962 | 2-wire control latching solenoids |
| FER963 | Control a 3-wire latching solenoids |
| FER501 | PH control and read there (required opt., And / u analogue) |
| FER520 | PC• program (required opt. Connection) |
| FER503 | Connection RS-232 |
| FER964 | Second slot RS-232 and connection |
| FER504 | Connection RS-485 |
| FER514 | Connection USB |
| FER965 | Box of connection RS-485•• |
| FER506 | E/u analogic 220 vac |
| FER522 | Option double RS232 + RS485 to USB and 485 |
| FER310 | GPRS modem option |
| FER508 | GSM modem with antenna and alim 220 vac or 12 vdc |
| FER515 | SMS messages option |
| FER523 | Upgrade from version 2 to version 3 |
| FER507 | Condizional of programme |
| FER972 | Allarm message gsm (need opz. coll. RS-232) |
| FER973 | Reg. pressure water in line (need opz. e/u analogic) |

• Programme PC described in the previous page

•• Power pack excluded

# RADIO SYSTEM AGROBEE

## For the fertigation controllers Agronic 2500 and Agronic 5500

AgroBee radio modules allow the activation of valves and other irrigation elements, as well as sensors and meters reading, achieving radio coverage up to 800 m or up to 1600 m with repeater, with very low power consumption and in accordance with the universal Zigbee communications protocol, which works at open frequencies of 868 mhz and 2.4 ghz.

It is the best substitute to cable in order to overcome obstacles, extend sectors, read sensors, etc, in the fertigation controllers Agronic 2500

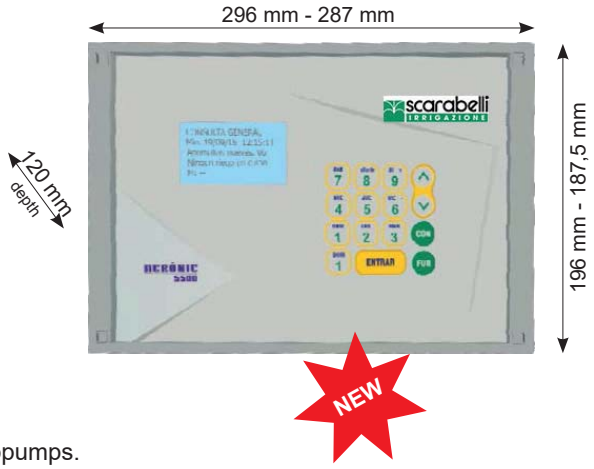
AgroBee system has different models, depending on its functions:

2 SD-2ED: 2 2 wires latch solenoids (or 1-3 wires) and 2 meters or digital inputs.

8 SD-2ED: 8 2 wires latch solenoids (or 4 3 wires) and 2 meters or digital inputs.

| AGROBEE | |
|---|---|
| **Code** | **Description** |
| OPG3004 | 2SD-2ED (2 solenoid latch 2 wires, 2 digital inlet) solar power |
| OPG3005 | 2SD (2 solenoid latch 2 wires) battery |
| OPG3006 | 2SD-2ED (2 solenoid latch 2 wires, 2 digital inlet) battery |
| OPG3014 | 8SD-2ED (8 solenoid latch a 2 wires, 2 digital inlet) battery |
| OPG3016 | 8SD-2ED (8 solenoid latch a 2 wires, 2 digital inlet) solar power with battery |
| OPG3018 | 9SD-2ED-2EA (2 threaded latch98 solenoids, 2 digital input) solar power supply |
| OPG3017 | RPT (module with function ripetitor) soler power |
| OPG3020 | H20 (3 analogic input, 1 ground water sensor) battery |
| OPG3021 | H20 (3 analogic input, 1 ground water sensor ) solar power supply |
| OPG3022 | 3MA (3 analogic sensors, 1 digital sensor) |
| OPG3023 | SDI-12 (for different sensors with bus-sdi12) |

# AGRONIC 5500




**DESCRIPTION:**

- Control device for irrigation and fertilization for hydroponic and and crops both, it is useful to manage CE and Ph of water irrigation.
- It is possible to adapt every kind of analogic sensors, digital, water counters through sensors. It is possible to stop and start program for irrigation, change fertilizers and sending alert on mobile phones.
- Inside greenhouses it is useful to control temperature and humidity to have a proper nebulization
- It is possible to use pesticides for each irrigation program.
- It is possible to combine two different kind of salt waters
- It is possible control the cleaning filters, to manage diesel engines, motopumps.
- Agronic 5500 has a detailed register to keep all alerts received for each sector updated every 10 minutes.
- Agronic 5500 can be connected to PC Agronic and mobile app “Agronic app”.
- Radio connection to function AgroBee that allow to manage valves, sensors and counters till a distance of 500 mt.

**IRRIGATION:**

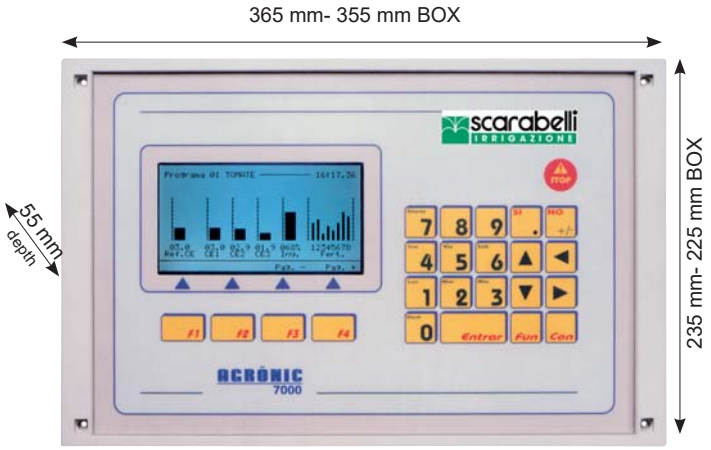
- It manages until 30 sectors with 16 indipendent program
- Each program has a start, irrigation unit by time and volume managing from 1 until 9 sectors all together.
- Conductivity is managed considered its value checked by the sensor or unit injection time or volume.
- Ph is adjustable considering a fixed value.
- One program can activate different activations

**FERTIGATION:**

- Control of injection until 4 fertilizers, one acid, one pesticide and one agitator.
- Each program can dose fertilizer in independent way considering conductivity ECE or for permanent injection; at the beginning it is injected 4 fertilizes to get the value programmed CE, then it will be completed the quantity planned for each fertilizers.
- Indipendent pre and post irrigation setting for each program

| **MODELS** | | | | |
|---|---|---|---|---|
| Code | Description | | | |
| OPG1303 | Agronic | 5510 | 220 V | Wall box |
| OPG1304 | | | | Inbox |
| OPG1305 | | 5520 | | Wall box |
| OPG1306 | | | | Inbox |
| | **OPTION AGRONIC 5500** | | | |
| FER863 | Expansion 6 analogic input | | | |
| FER666 | Power 220V/12V | | | |
| FER864 | Option control diesel engine | | | |
| FER865 | Option double tension | | | |
| FER980 | Option Agronic PC | It is necessary GPRS option , USB connection o radio connection to connect Agronic PC | | |
| FER866 | Options Web Platform | It is necessary GPRS or WIFIi option to connect Agronic PC | | |
| FER867 | Options USB | | | |
| FER868 | Options GPRS/SMS | | | |

## AGRONIC 7000




The base unit internal to stay within the framework has the dimensions of 285 mm X 235 mm X 80 mm deep

**DESCRIPTION:** Controller for the control of irrigation and fertilization by CE and by time or volume units, acidity regulation, fertiliser mixing, pumping and filter cleaning, drainage, etc., plus breakdown detection and complete visualisation of data.

**PROGRAMS:** • 24 programs, with 32 sectors each and the opportunity to put programs together in order to obtain long sequences of sectors (which can be grouped from 1 to 32 that irrigate together) • programming can be for daily or weekly action or by frequence and with frequence and every day up to 6 starts • complete control of instantaneous flow with programming of the expected flow in each sector and tolerance percentage • manual starting and stopping of oulets and programs • modification of the irrigation units by manual factor
and by determining factors (4 determining factors can affect each irrigation program and make it start regardless of the planned timetable , on the basis of the data of radiation, tray level, soil humidity and room temperature sensors) • every irrigation programme has a curve in order to modify the values of the irrigation units, its frequency, CE and fertiliser units for 6 different times in one day.

**FERTIGATION:** • up to 8 configurable fertilizers, in indipendent tanks, plus 2 acids or acid and base • pre-fertigation and post-fertigation values indipendent for each program • the time or volume of each fertilizer to be applied can be planned indipendently for each sub-program • configurable use or not of mixers with pre-mixing, intermittent or continuous mixing • fertilizers can be applied in two different ways by choosing the richt injection system for each one: **a)** the injection by conductivity (CE) levels taken from the corrisponding sensor is done by pulsed outlets or, optionally, by 0-10 V outlets **b)** incontinuous (all the fertilizer planned for a sector is injected together) or with long intermittences (all the fertilizer planned for an irrigation unit is injected together) by working in proportional way • we can assign a volumetric counter and an agitator to every fertiliser • it is possible to regulate the CE by difference with the input CE and proportional compensation by the variations in this input CE • it allows the mixing of two waters of different salinity, with an independent resulting conductivity in every one of the irrigation programmes.

**PUMPING:** • from 1 to 6 general irrigation outlets, with independent timings and, for each sector, one or more engines can be activated • the general nº1 can give a 0-10 volt analogical outlet, in order to connect it to a frequency variator and maintain a pressure in the irrigation pipe independent for every programme.

**CONFIGURABLE OUTLETS FOR THE MANAGEMENT OF:** • fertilizer mixers including pre-mixing, continuous and intermittent mixing • no limits for the number of filters, with corrisponding ind pendent washing times. The washing sequence can be started by the pressure difference and/or the time or volume of water circulation and there is a control of the continuous washing cycles • alarms for more than 20 different conditions, activating one of the three alarm outlets (CE, pH, general), recording the anomaly.

**DIGITAL INLETS CONFIGURABLE FOR:** • irrigation volumetric counter, fertiliser volumetric counter, differential pressure gauge for filter cleaning, temporary breakdown, general breakdown, conditioning stop and programme starting • finding recordable breakdowns through corresponding sensors • carrying out the startings set for external sensors • setting a delay time for carrying out a signal.

**DRAINAGE:** • system for the control of the quantity of drained water in crops and the measuring of drained water parameters (electric conductivity, acidity, tray level in millimetres, quantity of drained water) in a maximum of nine different crops. In this way, the water supplied for every crop will change at every irrigation, so that the drainage produced coincides with the programmed one.

**RECORD:** • It can have various records, which are always updated, for the accumulation of water and fertilizers at a general way and for sectors, program startings, drainage done in each irrigation, filter cleanings, mixers, erased, etc.

**DISPLAY:** • graphic lightened screen of 240x128 pixels (16 lines of 40 characters), contrast adjustment and keyboard with 24 keys.

**MODELS AND OPTIONS:** • Basic model with 40 independent outlets plus 16 inputs for digital signals and 16 analogical inputs, which can be extended • Extensions of 16 relay outlets
• Extensions of 16 digital inputs.
• Option of 12 analogical outlets 0-10 V.
• Option of mixing of 2 waters.
• Option of sending short messages to GSM (it can also receive orders such as start or stop a programme, set at “Stop”, etc.).
• Option of link to PC for remote management;
• Option of water pressure regulation.
• Expansion modules for field by cable controlling the drainage.
• Expansion modules for field by cable with or without sensors.
• Expansion modules for field via radio.

| MODEL AND OPTIONS | | |
|---|---|---|
| Code | Power | N° out |
| OPG1200 | 220V AC | 40 |
| OPG1201 | 12V CC | |
| | **OPTION AGRONIC 7000** | |
| FER455 | 16 outlet with relé | |
| FER550 | 12 outlet analogic | |
| FER551 | 16 digital Inlets | |
| FER552 | Expansion 5 relé outlet and 2 digital inlet | |
| FER553 | Expansion 5 relé out and 2 + 2 Inlet dig./an. | |
| FER555 | Protection box for expansion module | |
| FER554 | Message SMS | |
| FER558 | Mixture 2 water | |
| FER559 | Pressure regulator in line (need op. 12outlet analogic) | |
| FER500 | Program PC | |
| FER508 | GSM modem option | |
| FER965 | Box connection RS 485•• | |

•• power pack excluded

N.B.: the controller needs a separate power supply for outputs

## VIA INTERNET AND SMS PROGRAMMER

These models are completely substituting an irrigation controller, all functions are already integrated.
They are sophisticated controllers, which are designed to work with DC valves only. The model 30 and 60 are
operated via Internet and SMS and work on battery and solar power panel.

| Code | Model | N° solenoid DC |
|---|---|---|
| OPG352 | 30 | 3 |
| OPG351 | 60 | 6 |

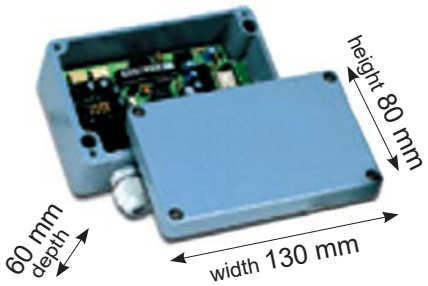
### TECHNICAL DATA

- Stand alone telemetry device based on the Wavecom quad band engine approval ETSI 300 113, ACA, FCC and CE approval
- 1 output with bi-directional communication possible to control the outputs and retrieve status information from the inputs
- Open/close with pulse 100 m/sec.
- Solar power supply voltage 6 Volt (Non Volatile Memory) - no mains required
- Status-LED`s for inputs and outputs as well as for GSM network
- Soil Moisture and/or ET calculations based scheduling utilizes industry accepted water budget methodology
- Multi-Level scheduler options to maximize water savings without sacrificing the crop quality
- 24/7 - 365 days ET synchronization for traceability to water authorities - ET-based and flow sensing scheduling
- Secured wireless two-way communication via GPRS and automated system alerts via email or cell phone messaging (SMS)
- Flow Reports, daily ET information, built-in performance tools
- Automatic or manual rain shut off alerts and automatic field wire fault protection and detection and flow fault alerts
- No central software required - only internet browser and password required
- Unlimited programs with unlimited start times each
- Solar powered and NVM
- 3 year Limited Warranty
- Lightning/Surge Protection
- IP65 enclosure
- Permanent remote control in “real time” via cell phone by SMS/Manual control through webpage
- Dimensions: 450 X 200 X 300 mm
- Temperature range: -20° C up to +50° C

## TRANSMITTERS FOR PROBES FOR AGRONIC 4000 E AGRONIC 7000

Transmitter for reading probes pH and electrical conductivity (EC) in the irrigation water.
It detects the signals coming. from the sensors and generates an output 4-20 mA standard values readable by the controller.
It is possible to read pH probes with single or double salt bridge of union with BNC connector (coaxial) and EC probes of 4 electrodes with temperature compensation for NTC, fast connection for connector contacts 7.
The transmitter pH and EC 2 electrodes (used in systems with double safety probe) has the same functions, but it works with EC probes of 2 electrodes (K = 1) with temperature compensation for Pt1000.

| Code | Description | |
|---|---|---|
| FER400 | Transmitter | pH/EC |
| FER402 | | EC |
| FER401 | | pH |




## GSM WARNING DEVICE

### DESCRIPTION

| Code | Description |
|---|---|
| ECB001 | WARNING GSM 12-24 VCC/VAC |
| ECB010 | WARNING GSM 230 VAC/50 Hz |

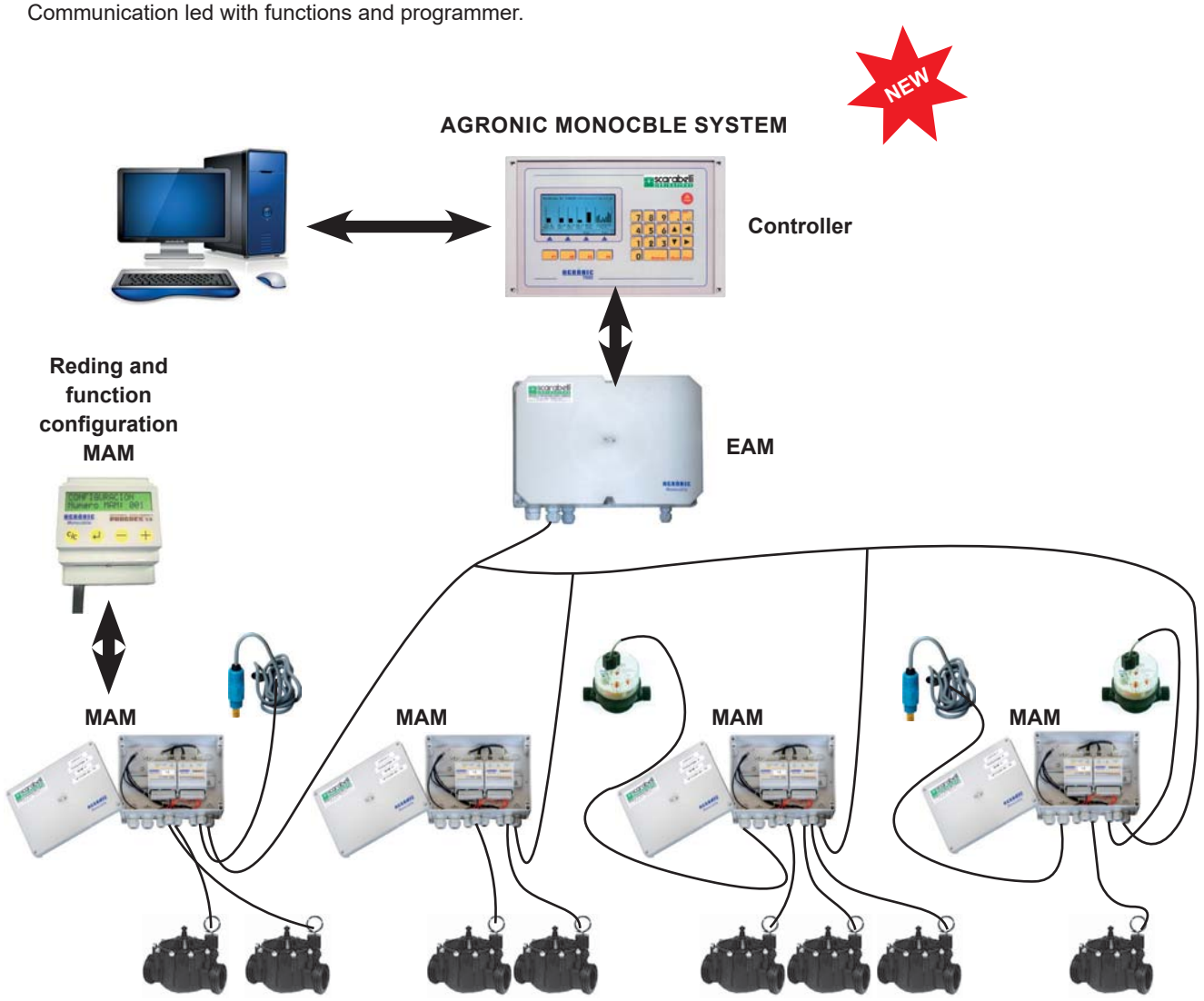
The GSM warning device is a unit designed to send short messages (text messages) to GSM mobile phones, once the signal from any external elements to which it is connected is received.
It can be used with any system which needs to send warnings or alarms to mobile phones.
The unit has 4 inputs to activate the sending.
Every input has its own message which can be programmed by the user. The messages can be sent to two telephone numbers (inputs 1 and 2 to one number and 3 and 4 to another one), or all of them to the same number.
The unit has to be connected to a GSM modem in order to send messages. This modem can also be used to connect at a distance any of the units which have a programme to connect to a PC.
The unit is configured through a PC programme.
This programme allows you to write messages, decide the the telephone numbers the warnings will be sent to and decide the other configuration commands.
**Some of the many applications of the GSM warning device are:**
• Using a thermostat, it can alert of the risk of frost • It can alert of the tank levels or of the end of a group of hoppers • It can warn of any anomaly in the field or any happening in the irrigation controller • It can warn of the opening of doors or windows both at home or at work • Warning of power interruption, when it is longer than the programmed time. In this case the unit has to be fed by a battery • It sends alarm messages in cold stores for fruits, frozen goods, etc. • It warns of any incident in our house. • It alerts of the fire alarm or any problems which activate an alarm • A cable is connect it to a GSM modem or a telephone GSM with an PCMCIA card as well as the software for its configuration.

### TECHNICAL DATA

**Case:** Plastic 4 DIN modules
**Operating temperature**: -10 to +50 °C
**Power supply:** 12-24 Vdc / Vac or 230 Hz Vac/50
**Power consumption:** 4 VA
**GSM:** Dual Band 900 - 1800 MHz
**Antenna Connector:** SMA-F
**Outputs:** 2 relay bistable
**Digital Inputs:** 2 dry contact inputs
**Analog Inputs:** 1 configurable 0-10V or 0-20 mA
**Display:** 5 LED indicator - 2 buttons

# AGRONIC MONOCABLE FOR AGRONIC 4000 AND 7000

- It is projected for valves activation and reading of the counters and sensors through bifilar cable.
- Monocable with transformer FER456 that manage information coming from irrigation programmer to field and viceversa.
- You can connect until 120 functions.
- You can join distance over 10 km from monocable function until last function in field (with repeater possible to get over 15 km). Connection can be through via cable to RS485, serial port RS232 or via radio with radio antenna modem EAR/EAM.
- Communication is through protocol ModBus
- Transmission speed adjustable considering system of communication used (radio, modem etc)
- Check interruption electricity that allow deactivation of valves.
- Communication led with functions and programmer.




| AGRONIC MONOCABLE FOR AGRONIC 4000 AND 7000 | |
|---|---|
| Description | Code |
| Option Monocable (it needs connection RS-485 see Via Radio Agrobee system" page 200) | FER967 |
| Monocable function with transformer (EAM) | FER456 |
| Function in field incapsulated 1 output - 2 input (MAM 1-20) | FER460 |
| Function in field incapsulated 1 output 24V - 2 input (MAM 1-20R) | FER462 |
| Function in field incapsulated 2 output (MAM 2-00) | FER457 |
| Function in field incapsulated 3 output - 2 input (MAM 3-20) | FER461 |
| Inbox function in field 2 output - 4 digital input (2 can be counters and 1 analogic sensor) (MAM 2-41) | FER466 |
| Inbox function in field 5 output - 7 digital input (5 can be counters and 1 analogic sensor) (MAM 5-71) | FER467 |
| Inbox function in field 8 output - 10 digital input (8 can be counters and 1 analogic sensor) (MAM 8-101) | FER468 |
| Line protection | FER459 |
| Reding and function configuration | FER458 |

## ► AUTOMATIC SYSTEM OF INJECTION

# READING AND CONTROL SYSTEM COMPACT V

### DESCRIPTION

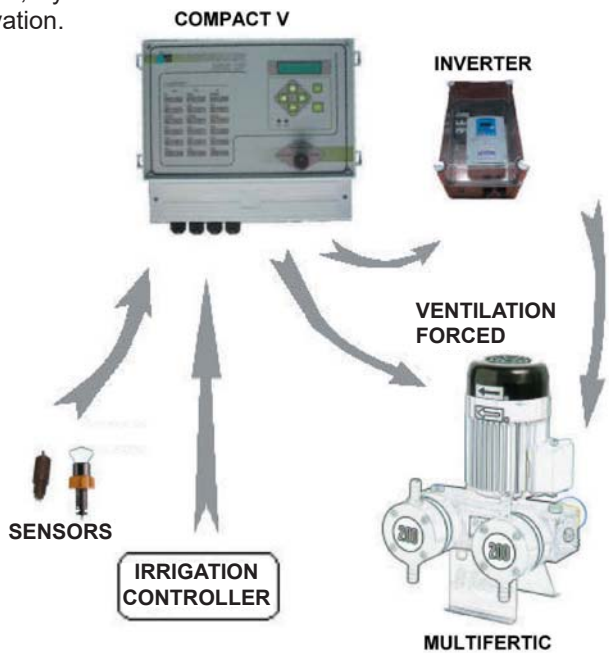
COMPACT V is a complete and personalizable system for reading and controlling the irrigation water.

### TECHNICAL FEATURES

The COMPACT V system can:

- set the irrigation water pH on the basis of a value previously set by the user, by adjusting the dosage of an injection module of a MULTIFERTIC pump through the action of a frequency changer (COMPACT V + pH sensor);
- set the irrigation water conductivity on the basis of a value previously set by the user, by adjusting the dosage of a MULTIFERTIC pump injection module through the action of a frequency changer (COMPACT V + EC sensor);
- adjust the dosage of a MULTIFERTIC pump injection module proportionally to the irrigation water flow rate through the action of a frequency changer (COMPACT V +flow rate gauge);

This system, without any particular alteration, can work as an adjuster of one of the values by choice (pH or conductivity) and as a reader for the other or for the flow rate, if all the sensors available are used (pH – EC – flow rate).
It is possible to insert alarms for any of the values taken into account, by setting a maximum and a minimum value with a delay time for the activation.




| Code | Description |
|---|---|
| FER092 | Compact - V |

| SPARE PARTS AND ACCESSORIE FOR COMPACT V | |
|---|---|
| Code | Description |
| FER086 | Servo |
| FER087 | Analogic servo 4/20 mA |
| FER095 | Reader probe |
| FER115 | Variable frequency power 0,7 CV |
| FER116 | Variable frequency power 1,0 CV |
| FER119 | Variable frequency power 1,5 CV three phase |
| FERC475 | Protection Variator |
| FER106 | Ventilation forced for Multifertic |
| FER107 | Ventilation forced Elettrofertic low pressure |
| FER108 | Ventilation forced Elettrofertic high pressure |

# CONTROL SYSTEM CONTROLLER 2000

## DESCRIPTION

CONTROLLER 2000 is a system for the control of fertigation that determines the conductivity of the irrigated water, depending on a value previously set by the user, by adjusting the dosage of one or more injection modules of a MULTIFERTIC pump through the action of a frequency changer.

## TECHNICAL FEATURES

**The selected conductivity value can be adjusted in two ways:**

• Directly, by setting a conductivity level in m

• By planning the injection of fertilizer according to the flow rate of the irrigated water.

At the same time a servomotor adjusts one of the injection modules in order to obtain a predetermined pH parameter of the irrigated water.

**The system can be coupled to a device called SECTOR (Pic. 1) in order to:**

• Set out up to 8 different pH, EC and proportionality settings for the same number of different irrigation sectors;

• Constantly visualize in a brighter way the adjusted values;
constantly visualize the activated sector.

**The values constantly visualized are:**

• Conductivity (in mS);

• PH;

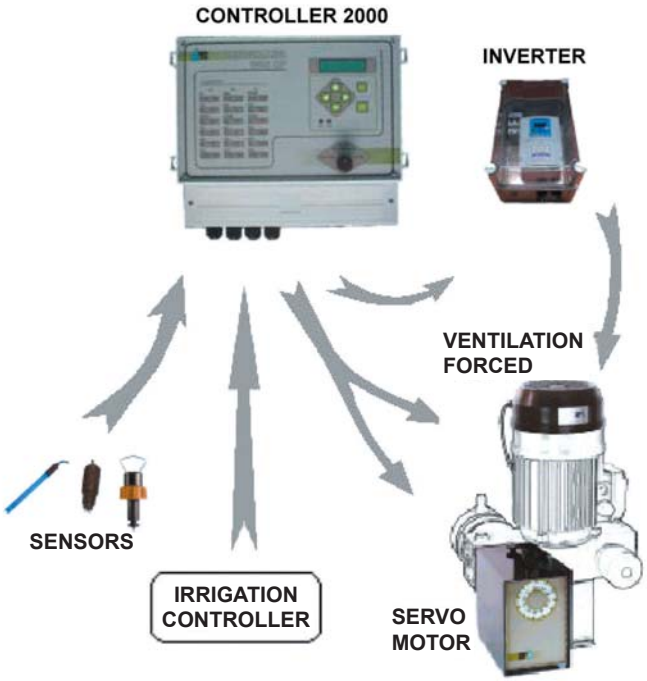
• Flow rate ($m^3$).

It is possible to insert alarms for each of the values taken into account, by setting a maximum and a minimum value with a delay time for the actuation.

**Sector**

| Code | Description |
|---|---|
| FER082 | Controller 2000 CP (standard controller) |
| FER083 | Controller 2000 CS (with Sector) |

| SPARE PARTS AND ACCESSORIE FOR CONTROLLER 2000 | |
|---|---|
| Code | Description |
| FER086 | Servo |
| FER087 | Analogic servo 4/20 mA |
| FER095 | Reader probe |
| FER115 | Variable frequency power 0,7 CV |
| FER116 | Variable frequency power 1,0 CV |
| FER119 | Variable frequency power 1,5 CV three phase |
| FERC475 | Protection Variator |
| FER106 | Ventilation forced for Multifertic |
| FER107 | Ventilation forced Elettrofertic low pressure |
| FER108 | Ventilation forced Elettrofertic high pressure |



## CONTROL SYSTEM CONTROLLER 3000

### DESCRIPTION
Fertigation Controller with 6 analogue Outputs and 12 digital Inputs for the automatic Regulation of the fertilizing system.

### MANUAL BEGINNING OR CONTROLLER OF IRRIGATION
Easy to install and handle Fertigation Controller, with intuitive menus and permanent information of the most important parameters to control in an irrigation system.
Through the signal of a simple irrigation controller, the fertigation programmes are controlled for each of the irrigation stations.
It allows storing the register of the controlled values: water consume, fertilizers consume, acid consume and system performance:
• Maximum and minimum pH, EC, Flow and pressure Values;
• 12 Fertigation programmes;
• 6 analogue Outputs for the injection regulation;
• 2 regulation channels A/.

### PROGRAM OF SUPPORT READING DATA FOR EACH ONE OF THE IRRIGATION SECTOR
It allows controlling and handling the Controller 3000 by means of the PC.
Up to 60 m distance USB connection.
TRACEABILITY: it stories all the registers of the displayed values:
• Maximum/minimum and average values of the Ph, EC, Flow and pressure for irrigation area;
• Curves of all the displayed menus;
• Records and traceability printing.

### POWER SUPPLY
230V50/60HZ

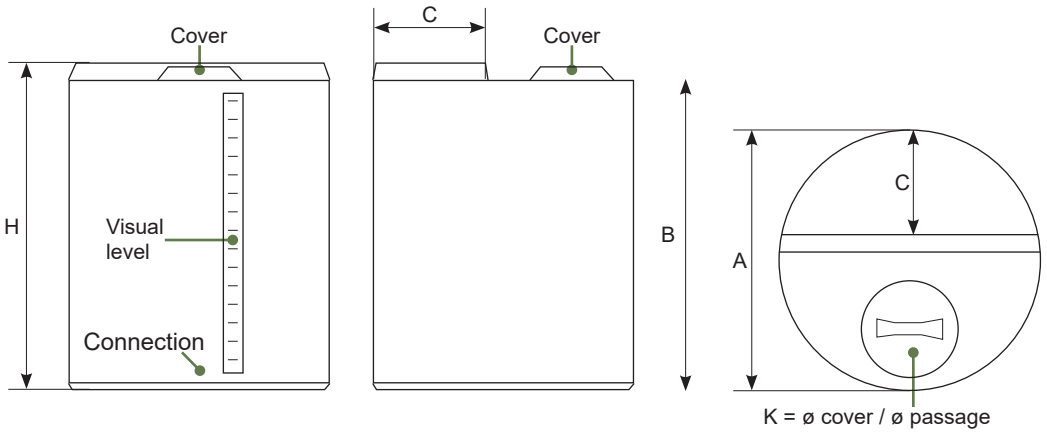
| Code | Description | Inlet | Outlet | Software fertigation included |
|---|---|---|---|---|
| FER150 | Controller 3000 - 2 | 2 | 5 | no |
| FER151 | Controller 3000 - 2 Soft | 2 | 5 | no |
| FER152 | Controller 3000 - 6 Soft | 6 | 5 | yes |
| FER153 | Controller 3000 - 6/12 Soft | 6 | 12 | yes |

## ► MACHINES FOR FERTIGATION

# FERTIGATION KIT (WORKING TIME)

**DESCRIPTION**
Closed tanks of various sizes and shapes, with stirrer, electric and electric metering pumps already installed

| Code | | | Injection l/h | Tank liter | Dimensions mm | | | | | Connection |
|---|---|---|---|---|---|---|---|---|---|---|
| Single phase 220 V 50 Hz | Three phase 220/380 V 50 Hz | 12V CC | | | A | B | H | C | K | |
| FERK104 | FERK107 | - | 100 | 300 | 710 | 840 | 890 | 300 | 255/200 | ½" |
| FERK105 | FERK108 | - | 200 | | | | | | | |
| FERK106 | FERK109 | - | 300 | | | | | | | |
| FERK110 | FERK113 | - | 100 | 500 | 885 | 950 | 1000 | 380 | | 1" |
| FERK111 | FERK114 | - | 200 | | | | | | | |
| FERK112 | FERK115 | - | 300 | | | | | | | |
| - | - | FERK120 | 100 | 1.000 | 1100 | 1150 | 1200 | 500 | | |
| FERK100 | FERK101 | FERK122 | 300 | | | | | | | |
| FERK102 | FERK103 | FERK121 | 500 | | | | | | | |




# PREMIXED FERTIGATION BENCH

**DESCRIPTION**
- Aisi 304 structure
- From 200 to 500 lt vessel
- 2-3-4-5 output versions available
- Venturi 4 suction supply pump (standard), available until 8 suction
- Agronic 4000/5000 or 7000 electronic remote control
- Supply pump and its sized automation related to the irrigation system capacity.

## FERTICONTROL PRO-FV16 T-V (Time or Volume by pass working)

NEW

**APPLICATIONS**

Focused to solve problems as managing fertilizers and acidification through time injection control. Volume option through counters on fertilizers. It manages acid through Ph probe.
Compact and easy to install, it represents the best solution in terms of investment for small farms.

**TECHNICAL FEATURES**

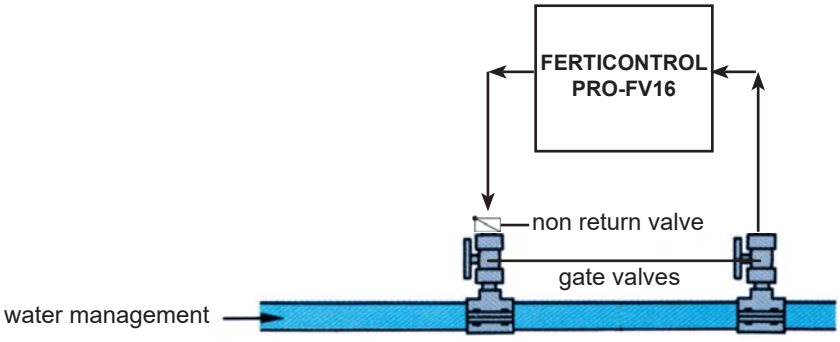
- Size: height cm.130 – width cm.70 – depth cm.50
- Frame: inox aisi 304
- Minimum working pressure 1,5 bar
- Max injection pressure depends by number of aspiration (max 6 bar)
- Horizontal electro pump 1,2 hp – max 2 hp 230V single phase
- LCD display digital tool inside the panel control to read EC and alarm set point
- Programmer FV16 inside panel control to manage: 16 electro valves 24V AC, 3 fertilizers time/volume, 3 fertilizers counters, 1 counter for water, 1 pump to relaunch, 1 general pump or master valve, 5 digital inlets (1 irrigation counter, 3 fertilizers counters, 1 differential pressure switch), 3 outlets filters backwash, 1 alarm outlet
- Possibility to program 2 outlets to manage 2 agitators (see pag. 207 of the catalogue)
- Dosing digital PH pump 8 lt/h with lcd display,
- Electronic panel size 40hx30lx15w
- Box in plastic material IP55
- power absorption 12 amper 230 V single phase for pump 2 hp

| FERTICONTROL PRO-FV16/T (TIME) | | | |
|---|---|---|---|
| CodE | Fertilizer aspiration | Injection Ph | Max pressure bar |
| AFE1005 | 1+ | 1 | 6 |
| AFE1006 | 2+ | | 5 • |
| AFE1007 | 3+ | | 4 • |

| FERTICONTROL PRO-FV16/V (VOLUME) | | | |
|---|---|---|---|
| CodE | Fertilizer aspiration | Injection Ph | Max pressure bar |
| AFE1008 | 1+ | 1 | 6 |
| AFE1009 | 2+ | | 5 • |
| AFE1010 | 3+ | | 4 • |

• Option increased pressure in bar

## BYPASS OPERATION



# FERTICONTROL CE FERTIGATION BENCH (ELECTRICAL CONDUCTIVITY functioning)

**APPLICATIONS**

Focused on solving the problems inherent the managing of fertilizer and acidification, control of fertilizer and acid injection through a probe.
Compact and easy to install, represents the best solution and investment for the small farms.

**TECHNICAL FEATURES**

- Size: height cm.130 – width cm.70 – depth cm.50
- Supporting frame: aisi 304 s/s
- Machinery minimum working pressure 1,5 bar
- Machinery maximum working pressure 4 bar (except for 3 suction standard bench, 3 bar)
- n.2 fertilizer suction by Venturi injection lt/h 400 max each one
- Horizontal multi-stage close coupled s/s pump – 1 hp – single-phase , the fertilizer injection devices (Venturi) are situated in suction
- Injection fertilizer capacity displayed on the flowmeters
- LCD display digital tool inside the control panel to monitor the two e-valves through two different proportional band EC set point

| MODELS AND OPTIONS | | | |
|---|---|---|---|
| Code | Name | Aspirations | volume option (controller excluded) |
| AFE999 | Ferticontrol CE | 2 | no |
| AFE1000 | | 3 | |
| AFE1001 | | 2 | yes |
| AFE1002 | | 3 | |
| **OPTION ADDITIONAL ASPIRATION** | | | |
| Code | Description | | |
| KAF002 | Option add aspiration | | |

- LCD display digital tool inside the control panel to monitor the water Ph through proportional band signal in 4-20 mA to proportioning pump
- LCD display digital PH proportioning pump (8 lt/h – 8 bar), adjustable by proportional band signal in 4-20 mA optimized by a Ph tool situated into the control panel
- Electronic control panel compliant with the current standards:
  - Size 40H x 30L x 15P
  - IP 55 plastic material case
  - Interlocking device main switch
  - LCD display to visualize electric data
  - Cos-f motor protection
  - Max absorbing 6 amper 230 V single-phase

# FERTICONTROL 2000 (Electrical conductivity)

**DESCRIPTION**

It is a product suitable for solving the problems linked to the management of fertilizer and of the acidification of the circulating solution. It is a system completely pre-assembled on a self-supporting stainless steel structure that includes the electronic control systems both of the irrigation systems and of the injection of acid and fertilizer.

**USES**

It is a system particularly suitable for cases in which an irrigation system already exists and you want to manage the injection of acid and you need a trustable and easy to install fertigation control. In particular, when refined needs in terms of farming techniques are counterbalanced by the need to control costs without renounce the high technical performances .

**TECHNICAL FEATURES**

In practice, our machine is able to adjust the conductivity values, that are proportional to the quantity of fertilizer injected into the system, through the automatic adjusting of a piston electric dosing pump (both in AC and DC), which is provided with up to 4 injection heads, through a frequency changer. In the basic model the conductivity control process is performed on the basis of signals received by a probe, in order to maintain a previously set value in mS/cm. At the same time and always depending on signals received by a probe, through a servomotor that regulates one of the injection heads of the dosing pump, the previously set pH set-point of the circulating solution will be maintained.
On the machine display it will be possible to constantly visualize the conductivity (mS/cm) and pH levels. It will be possible to insert an alarm for each of the values taken into account in terms of a minimum and maximum value and delay time in the acceptance of the bearing values .
The basic model includes a head for the acid injection and two for the fertilizer injection. The two main activities (pH and conductivity control) will have to be performed simultaneusly, while the injection heads dimensionsng will be set depending on the quantity of water to be treated.

# FERTIGATION

**FERTICONTROL 2000**

**AVERAGE FLOW**

| Code | Model | Injection l/h | Injector Multifertic | Contr. Injec. | Contr. pH |
|---|---|---|---|---|---|
| AFE2496 | V-50 | 50 | 1 | Compact V | no |
| AFE2497 | V-100 | 100 | | | |
| AFE2499 | V-200 | 200 | | | |
| AFE2498 | V-300 | 300 | | | |
| AFE2500 | V-500 | 500 | | | |
| AFE150 | V-PH-100-20 | 100 + 20 | | | CMS pH |
| AFE151 | V-PH-200-20 | 200 + 20 | | | |
| AFE152 | V-PH-300-20 | 300 + 20 | | | |
| AFE153 | V-PH-500-20 | 500 + 20 | | | |
| AFE169 | 50-50 | 50 + 50 | | C. 2000 CP | Servo |
| AFE173 | 100-50 | 100 + 50 | | | |
| AFE174 | 100-100 | 100 + 100 | | | |
| AFE175 | 200-100 | 200 + 100 | | | |
| AFE176 | 200-200 | 200 + 200 | | | |
| AFE177 | 300-100 | 300 + 100 | | | |
| AFE178 | 300-200 | 300 + 200 | | | |
| AFE179 | 300-300 | 300 + 300 | | | |
| AFE180 | 500-100 | 500 + 100 | | | |
| AFE181 | 500-200 | 500 + 200 | | | |
| AFE182 | 500-300 | 500 + 300 | | | |
| AFE183 | 500-500 | 500 + 500 | | | |
| AFEVV3000 | 3000-50-50 | 50 + 50 | 2 | Controller 3000 | Controller 3000 |
| AFEVV3001 | 3000-100-50 | 100 + 50 | | | |
| AFEVV3002 | 3000-100-100 | 100 + 100 | | | |
| AFEVV3003 | 3000-200-100 | 200 + 100 | | | |
| AFEVV3004 | 3000-200-200 | 200 + 200 | | | |
| AFEVV3005 | 3000-300-100 | 300 + 100 | | | |
| AFEVV3006 | 3000-300-200 | 300 + 200 | | | |
| AFEVV3007 | 3000-300-300 | 300 + 300 | | | |
| AFEVV3008 | 3000-500-100 | 500 + 100 | | | |
| AFEVV3009 | 3000-500-200 | 500 + 200 | | | |
| AFEVV3010 | 3000-500-300 | 500 + 300 | | | |
| AFEVV3011 | 3000-500-500 | 500 + 500 | | | |

**HIGH FLOW**

| Code | Model | Injection l/h | Injection | Contr. Injec. |
|---|---|---|---|---|
| AFE200 | VDostec-500 | 500 | 1 Dostec | 1 Compact V |
| AFE201 | VDostec-750 | 750 | | |
| AFE202 | VDostec-1000 | 1.000 | | |
| AFE250 | VE-500-500LP | 500 + 500 | 1 Elettrofertic B.P. | |
| AFE251 | VE-500-500HP | | 1 Elettrofertic A.P. | |
| AFE252 | VE-750-750HP | 750 + 750 | | |
| AFE253 | VE-1000-1000HP | 1.000 + 1.000 | | |
| AFE260 | 3000Dostec 500-500 | 500 + 500 | 2 Dostec | Controller 3000 |
| AFE261 | 3000Dostec 750-500 | 750 + 500 | | |
| AFE262 | 3000Dostec 750-750 | 750 + 750 | | |
| AFE263 | 3000Dostec 1000-500 | 1.000 + 500 | | |
| AFE264 | 3000Dostec 1000-750 | 1.000 + 750 | | |
| AFE265 | 3000Dostec 1000-1000 | 1.000 + 1.000 | | |

**OPTION**

**AVERAGE FLOW**

| Code | Description | l/h |
|---|---|---|
| FER031 | Additional Injection | 50 |
| FER032 | | 100 |
| FER033 | | 200 |
| FER034 | | 300 |
| FER035 | | 500 |

**SET PH MACHINES HIGH FLOW**

| Code | Model | Injection l/h | Injector | Contr. pH |
|---|---|---|---|---|
| AFEK100 | Kit ass. V100 | 100 | Multifertic | Compact V |
| AFEK101 | Kit ass. V200 | 200 | | |
| AFEO005 | Option additional injection 100 lt | | | |
| AFEO006 | Option additional injection 200 lt | | | |

**OPTIONS FOR ALL FERTIGATION MACHINES FERTICONTROL 2000••**

| Code | Description |
|---|---|
| FER101 | Option proportional electronic flowmeter GF (requires coupling with clamp saddle specific function of the pipe diameter) |
| FER102 | Flowmeter steel weld |
| AFEO001 | Agronic 2509• |
| AFEO003 | Agronic 2518• |
| AFEO004 | Agronic 2527• |
| Vari | Clamp for flowmeter |

• no install on Ferticontrol V – •• they are also applicable to all options for the controller Agronic 2500

# FERTICONTROL CROPS (operation VOLUME)

## DESCRIPTION

Dedicated equipment to solve all the problems related to the management of fertilizer and acidification of soil solution in microirrigation systems.
Benches for fertigation operating in completely pre-assembled bypass, with inlet and outlet to which to directly connect the main line of the irrigation system.

## TECHNICAL FEATURES

- Dimensions: height cm. 120 - width cm. 71 - cm depth. 51;
- Support frame: anodized aluminum;
- Minimum working pressure of the machine: 1,5 bar;
- Maximum working pressure of the machine: 4,5 bar;
- Horizontal multistage pump cylinder block - 0.75 kW - Single Phase (parts in contact with liquid are made of stainless steel AISI 304), with respect to which the fertilizer injection device (Venturi) is placed in vacuum;
- Actual extent of overall fertilizer injection viewable directly from the flow meter (max scale measuring 400 l / h) mounted before the Venturi tube;

**Electrical control panel in accordance with the regulations:**

- Size in cm: 25 (H) x 20 (L) x 10 (D);
- Watertight box IP 56;
- Main switch with door lock;
- Manual switch-zero-automatic suction pump with Venturi light running and stopped.

| MODELS | | | | | | | |
|---|---|---|---|---|---|---|---|
| Code | Fertilizer injection | pH control | N° injection | Weight Kg | Counter fertilizer•• | Absorption A | Agronic 2500 12 outlets |
| AFEJA001 | Proportional | A probe | 2 fert + 1 acid | 50 | sì | 6 | yes |
| **OPTIONS FERTICONTROL CROPS•** | | | | | | | |
| AFEO049 | Expansion until 4 fertilizers | | | | | | |
| AFEO051 | Increase of the max working pressure until 6 bar | | | | | | |
| AFEO052 | Expansion outlets of the controller ultil 18 | | | | | | |
| AFEO053 | Expansion outlets of the controller ultil 26 | | | | | | |

• They are also applicable to all options for the controller Agronic 2500

•• Necessary water meter in line to allow work in volume

# FERTICONTROL SA FERTIGATION BENCH

## DESCRIPTION

Equipment dedicated to solve all the problems related to management fertilisers and acidification of soil solution inside and outside of the soil.
Fertigation machines working in by-pass, it is completely pre-assembled with an enter and an exit to connect the main line of the irrigation system.

**TECHNICAL DATA**

| Controller | Fertilizer injection | Acid Injection | n° max injection | Weight Kg | Counter |
|---|---|---|---|---|---|
| Agronic 2500 | **Time or probe** | •Opzional probe with dosic pump | 4 + 1• | 95 | No |
| Agronic 4000 | **Probe** | A probe | 5 | | Yes |
| Agronic 5500 | **Electrical conductivity** | | | | No |
| Agronic 7000 | **Mix (conduc. electric or probe)** | | | | |

NB: stabilizer power not included

**MODELS**

| Code | Model | n° Injection | Outlet standard | Prog. Agronic |
|---|---|---|---|---|
| AFE2012 | 4016 S A2 | 2 | 16 | 4000 |
| AFE2013 | 4016 S A3 | 3 | | |
| AFE2017 | 4016 S A4 | 4 | | |
| AFE2018 | 4024 S A2 | 2 | 24 | |
| AFE2014 | 4024 S A3 | 3 | | |
| AFE2015 | 4024 S A4 | 4 | | |
| AFE2006 | 5008 S A3 | 3 | 8 | 5500 |
| AFE2007 | 5008 S A4 | 4 | | |
| AFE2008 | 5008 S A5 | 5 | | |
| AFE2009 | 5015 S A3 | 3 | 15 | |
| AFE2010 | 5015 S A4 | 4 | | |
| AFE2011 | 5015 S A5 | 5 | | |
| AFE2020 | 7000 S A3 | 3 | | 7000 |
| AFE2021 | 7000 S A4 | 4 | | |
| AFE2022 | 7000 S A5 | 5 | | |

They are also applicable to all of the programmer options used in the machine specification

N.B.: for information on agitators, with electrical panels, see on page 196

- Size and weight: H 140 cm W 85 cm, D 75, max weight 100 kg;
- Frame support: stainless steel AISI 304 or ion aluminium;
- Machine working pressure: min. 1,5 bar, max 6 bar;
- Centrifuge electro pump with vertical axis ( the parts in contact with liquids are made by stainless steel AISI 304) from HP 2-
- 400V or 230 single phase maximum absorption 4, 3 A (400V) e 7,5 (230 single phase);
- Maximum injection of each Venturi is 400 l/h;
- The real range of each injection system is visible directly from the flusimeters fixed before each Venturi tube (all of Ø ½")
- The models S A 2000 for the injection of the acid use a request a dosage pump of 20 l/h up to 7 bar;
- Probes in derivation for the ph control (in the S A 2000 and S A 5000 models) and the conductivity (only for S A 5000 models);

**Electric control panel disposed by the current normative:**

- plastic box IP 55;
- door lock switch
- manual override automatic zero Venturi suction pump with go and stop light
- alarm light
- irrigation pump controller
- agronic 5000 or agronic 2000 depending of the choosen model

# FERTICONTROL A FERTIGATION MACHINE

**DESCRIPTION**

Dedicated equipment to solve all the problems related to the management of fertilizer and acidification of soil solution in soilless crops or not. Benches for fertigation operating in bypass completely pre-assembled, with inlet and outlet to which to directly connect the main line of the irrigation system.

| TECHNICAL DATA | | | | | | | |
|---|---|---|---|---|---|---|---|
| Controller | | Fertilizer injector | Acid injector | N° max injection | Weight Kg | Counter | Stabilizer power |
| Agronic | 4000 | **Volume with reader option** | Option only read and control | 8 | 190 | Yes | Yes |
| | 7000 | **Mix (electrical or volume conductivity)** | Probe | 10 | 220 | | |

| Code | Model | Controller Agronic | Outlet standard Controller | n° injec | | Machine ass. A |
|---|---|---|---|---|---|---|
| | | | | Fert. | Acid | |
| AFE4003 | 4000-3 | 4000 | 16 | 2 | | 3,6 |
| AFE4004 | 4000-4 | | | 3 | | 4,8 |
| AFE4005 | 4000-5 | | | 4 | | 6,0 |
| AFE4006 | 4000-6T3 | | 32 | 5 | | 12,8 |
| AFE4007 | 4000-7T3 | | | 6 | | 14,0 |
| AFE4008 | 4000-8T4 | | | 7 | | 17,6 |
| AFE4009 | 4000-9T4 | | | 8 | | 18,8 |
| AFE7003 | 7000-3 | 7000 | 40 | 2 | | 3,6 |
| AFE7004 | 7000-4 | | | 3 | | 4,8 |
| AFE7005 | 7000-5 | | | 4 | | 6,0 |
| AFE7006 | 7000-6T3 | | | 5 | | 12,8 |
| AFE7007 | 7000-7T3 | | | 6 | | 14,0 |
| AFE7008 | 7000-8T4 | | | 7 | | 17,6 |
| AFE7009 | 7000-9T4 | | | 8 | | 18,8 |

| OPTIONS FERTICONTROL A 4000• | | |
|---|---|---|
| AFEO040 | Control PH and read EC | |
| AFEO091 | Outlets | 32 |
| AFEO093 | | 64 |
| AFEO095 | | 96 |
| AFEO096 | Additional injection until 8 | |
| AFEO070 | Double safety probe (need option e/u analogic) | |
| **OPZIONI FERTICONTROL A 7000•** | | |
| FER455 | Controller expansion 16 outets | |
| AFEO081 | Addition injections until max 10 | |
| AFEO070 | Double safety probbes | |

• They are also applicable to all options of the controller used in the specific machine

| DIMENSION ELECTRIC PANEL IN CM | | | | |
|---|---|---|---|---|
| Model | | H | L | P |
| Agronic | 4000 | 90 | 60 | 50 |
| | 4000 | 110 | | |

valid for 5 injections

- Dimensions and weight: height cm. 130 - width cm. 140 - Depth cm. 85 - for the weight see table above Whereas, for counters with a total number of injections over 5, both the dimensions and the weight are different;
- Support frame: anodized aluminum or stainless steel;
- working pressure of the machine: Minimum 1.5 bar, max 6 bar;
- Centrifugal pump with vertical axis (the parts in contact with liquid are made of stainless steel AISI 304), with respect to which the devices fertilizer injection (venturi) are placed on the suction side;
- Maximum injection of each venturi 400 l / h;
- Actual flow rate of each fuel injection system directly viewable by rotameters (max scale measuring 250 l / h for the injection of acid and 400 l / h for the injection of fertilizers) mounted before each venturi tube (all of Ø 1 / 2 “);
- Probes in derivation for the control of pH and conductivity (there is the option that uses two additional probes of security for these values);
- Electrical control panel lectern to comply with current regulations:
  - IP67 box with hinged opening;
  - Main switch with door lock;
  - Manual switch-zero-automatic venturi suction pump with light running and stopped;
  - A selector 1 for zero-computer;
  - Red LED alarm computer;
  - Green lights of activities acids and fertilizers;
  - White light framework in tension;
  - Control and protection electric stirrers for each injection envisaged;
  - Irrigation pump control.

## ► PROBES AND INSTRUMENTS

# WEATHER STATION VIA INTERNET

All weather data relevant to agriculture are permanently recorded by the Weather Station and sent to a climatic database on the Internet every two hours.

The weather station is powered by rechargeable batteries and a solar panel, so there is no need to replace batteries. It only requires a GPRS contract with sufficient coverage of the field and a GSM SIM card unlocked to be operational.

The climate database is available on a special Web site. Using your Internet browser and your password to access the site you can access the data, reports and graphs observed in your orchards or fields. In this site there is also a reserved area of administration where you can change the thresholds (basing on phenological stages) and phone numbers (people on duty) to be used in case of alarms.

**SERVICES OFFERED ON THE WEBSITE FOR CONSULTATION AND ADMINISTRATION:** see your field of climate data in tables and graphs - download this data in Excel and Access, or other spreadsheet and database programs - see your data and daily evapotranspiration calculate the water balance of your specific culture in real time - to calculate your daily field grades and values sunrise and sunset times for predictions of diseases in real time - to calculate the degree days for the production of wheat seeds - see your forecasts for diseases in real time: • Screw: Downy Mildew, Botrytis, black • Rotten Apples: Scab, shot fire • Pears: scab, brown spot • Peach: Monilia, Pseudomonas, Shut hole disease • Strawberries: powdery mildew, Botrytis cinerea • Cucumber • Mildew Tomatoes: blight, late blight, Botrytis cinerea • Potatoes: blight, late blight • Onions: Downy mildew, botrytis • Lettuce • Wheat Mildew: Rust, Septoria, Fusarium • Rapeseed, sunflower, pepper: Sclerotinia • Soy: Rust • Beet: Cercospora • Meadows: Pythium blight, brown patch, dollar spot, fusarium

**TECHNICAL DATA OF THE WEATHER STATION VIA INTERNET:** • Dimensions without sensors: 54 cm x 18 cm x 18 cm • Weight without sensors: 1.2 kg • Measurement range: 5 minutes • Acquisition interval: 60 minutes • Internet contact interval: 120 minutes from 6am, 00 to 22.00 • Temperature sensor: SMT 160-30 temperature sensor • Resolution: 0.1 ° C • Temperature sensor: ± 0.5 °C •Relative humidity sensor: HC 103 • Relative humidity sensor resolution: 1% • Accuracy Relative Humidity 25% - 90%: 3% • Rain Sensor resolution: 0.2 mm • Maximum rain Rain Gauge 12 mm / min • Rain gauge accuracy: ± 5% • Leaf wetness: resistance in the filter paper • Global radiation measuring range: 0 to 2000 W/m2 • Global radiation resolution: 1 W/m2 • Global radiation sensitivity range: 320 nm - 1,100 nm • Global Radiation accuracy: ± 5% • Anemometer measuring range: 0 - 40 ms-1 • Anemometer gust of wind: 60 ms-1 • Anemometer shot threshold: 1.4 m / s • Wind Direction Azimuth: 355 ° • Threshold wind vane: 0.8 ms-1 (10 degrees) • Barometer measuring range: 0 to 1103 mbar Barometer • accuracy: 0.5% • Watermark measuring range: 0 - 200 centibar • Watermark accuracy: + / - 15%.

| STANDARD MODEL | | |
|---|---|---|
| Code | Parameters monitored | Use |
| OPG359 | Soil moisture reading ECO - % of water in the soil | |
| FSM001 | Soil temperature | Soil temperature in the early stages of development of seedlings of wheat. The report of the soil temperature will give you a better understanding of the best date for sowing for wheat varieties susceptible. Help in predicting the mineralization of nitrogen. Calculation models of diseases of the meadows. |

| EXAMPLES OF USE WITH ADDITIONAL SENSORS | | | |
|---|---|---|---|
| | Configuration | | |
| | Sensors | Code | |
| Standard model + | 1 | FSM002 | Specific for all potato producers being able to calculate the periods of Smith for their fields. Accurate calculation of the sums of degree days. Display of the temperature at sunrise and sunset. Calculation models of diseases of the meadows. |
| | 1 + 2 + 3 | FSM003 | Economic solution for estimating daily evapotranspiration for areas with low to moderate wind |
| | 1 + 3 + 4 | FSM004 | To use predictive models of disease. |
| | 1 + 2 + 3 + 4 | FSM005 | To work with the majority of disease models. Economical solution for a good estimate evapotranspiration for areas with low to moderate wind. |
| | 1 + 2 + 3 + 4 + 5 + 6 | FSM006 | To work with the majority of disease models. Accurate calculation of evapotranspiration. |

| ADDITIONAL SENSORS | |
|---|---|
| Identification | Parameters monitored |
| 1 | Temperature and relative humidity |
| 2 | Global radiation |
| 3 | Rain |
| 4 | Leaf wetness |
| 5 | Wind speed |
| 6 | Wind direction |
| 7 | Barometric pressure |
| 8 | Wet bulb temperature for evaporative cooling and frost alarms via SMS |
| 9 | Watermark sensors for the continuous monitoring of moisture (n° 6 maximum) |

# WATERMARK TRANSMITTER

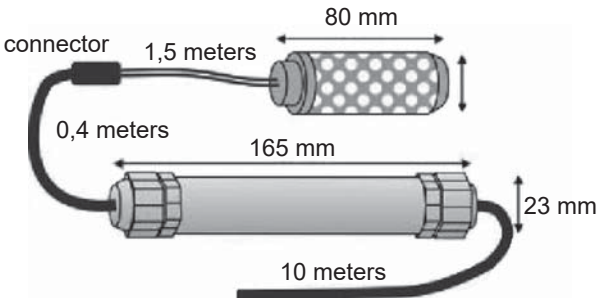
## DESCRIPTION

The Watermark sensor is used to measure the humidity of the soil.
The soil acts as a warehouse that stores irrigation and rain water, so that plants can use it according to their needs. The aim of using sensors for measuring soil water is to obtain a better knowledge of consumptions and water resources in the various parts of the farm, so that irrigation planning can be improved and it is possible to correctly evaluate the incidence degree of rain. This allows to eliminate estimates, reduce water use, reduce costs and the washout of fertilizers because of excess water.

## TECHNICAL FEATURES

Watermark transmitter for sensor turns the sensor signal into a standard signal of 4–20 mA. This allows to standardize readings and to obtain representative values.
Feeding: Minimum: +10 VDC; Standard: +12 VDC; Maximum: +15 VDC. Outlet signal: 4–20 mA. Reading range: 0–120 cbars.

| LINEAR | | | | |
|---|---|---|---|---|
| cbars | 0 | 40,27 | 85,56 | 120 |
| mA | 4 | 11,63 | 17,11 | 20 |




## INSTALLATION:

- The tranmsitter must be put in an horizontal position so that humidity does not build up in the ends.
- The tranmsitter must be put in a place which is not directly exposed to the sun.
- Do not put transmitter cables close to power lines.

| Code | Description |
|---|---|
| FER557 | Transmitter humidity soil probe |
| FER603 | Humidity soil proble with connector |

N.B.: transmitter and sensor do not work separately

# LVTD TRANSMITTER

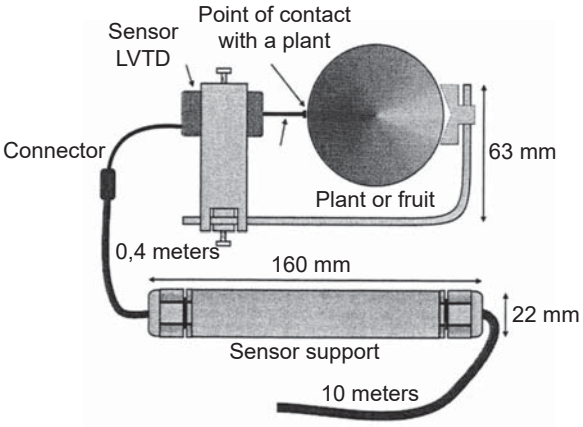
## DESCRIPTION

LVTD is a high precision sensor that measures the dilation and compression of a vegetal organism. This is very useful in order to know if the plant is growing in the right way, by showing us immediately the water stress the plant undergoes through the amplitude of sensor vibrations.

## TECHNICAL FEATURES

The transmitter reads the LVTD sensor and turns the reading into a standard signal 4 ÷ 20 mA.
The LVDT must be placed in the sensor clamp mechanism in order to attach it to the plant which is to be studied. There are different sizes of sensor clamp to adapt to the different thickness of the trunk or branches of the plants.

- Feeding: 12 VDC with a minimum of 11 VDC and a maximum of 15 VDC;
- Outlet signal: 4 ÷ 20 mA;
- Reading range: -2,5 mm ÷ +2,5 mm;
- Precision: 0,0012 mm;
- Sensitivity: <0,01%/°C;
- Non linearity: 0,3%;
- Maximum distance: mt. 200 with a cable of 0,5 mm section;
- Protections: overvoltage and inverse current;
- Work temperature: –10°C ÷ +70°C.



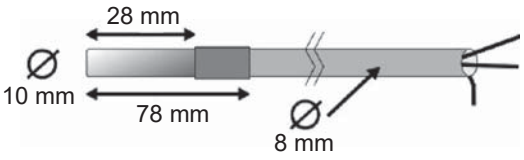

| Code | Description |
|---|---|
| FER515 | Transmitter probe lvdt |
| FER516 | probe lvdt without probeholder |
| FER517 | Probeholder lvdt 35/80 mm |

## TEMPERATURE PROBE

| Code | Description |
|---|---|
| FER416 | Normal temperature probe |
| FER417 | Temp. Probe 4/20 mA |

### DESCRIPTION
Temperature sensor that accomplishes the following features: reliability, linearity, sensibility and a high range of readings. Due to its characteristics, the sensor is not affected by the longitude of the associated cable and it is very easy to install.

### TECHNICAL FEATURES
• Feeding: 5V—14VDC max. Varistor of protection between the feeding and the ground (GDN).
• Outlet signal: 2,'732 V a 0ºC / 3,'732 V a 100 º C for a 10 k ohms loading resistance.
• Reading range: - 30 °C ÷ +100 ºC
The sensor is situated at the bottom of the stainless steel sheath of 10 mm and sealed with epoxi resin.
Through the interior comes out a cable of 2x1 with acrylic net and coating.
This assemblage it is sealed by a termoretractile tube.
The sensor have a varistor of protection between the feeding and the ground (GDN).
Depending on the unit to be connected, the sensor can control and register the room temperature on closed premises, of liquids, mass, etc.



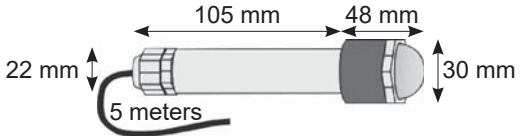

## SOLAR RADIATION SENSOR

| Code | Description |
|---|---|
| FER412 | Solar radiation probe |

### DESCRIPTION
Sensor for the reading of solar radiation with 4-20 mA output. Its spherical shape allows a perfect reception of the sun rays. Due to this it can obtain very real readings from sunrise to sunset.

**TECHNICAL FEATURES:** • Feeding: 12 VDC ± 16,7%; Outlet signal: 4 ÷ 20 mA; Reading range: 0 ÷ 2000 W/m2; • Maximum distance: 1000 metres (with a 0,5 mm2 cable ); • Protections: inverse current and overvoltage; • Work temperature: -10 °C ÷ +60 °C; Work humidity: 0% ÷ 100%.

Easy to install on a pole by means of a clamp which is supplied with the sensor. The sensor is protected to bear any adverse climatic conditions: rain, wind, high humidity, etc.

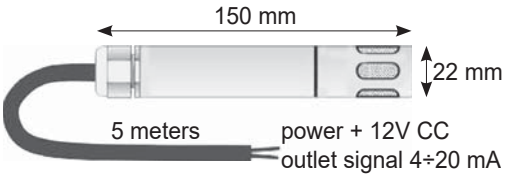



## RELATIVITY HUMIDITY SENSOR

| Code | Description |
|---|---|
| FER415 | Humidity relative probe 4 - 20 ma |
| FER419 | Humidity relative probe 4 - 20 ma + temperature |

### DESCRIPTION
Environment relative humidity sensor of high sensitivity and precision. It needs to be installed in horizontal position through the tongs we provide. It is suitable for environments with chemical steams such as isopropylene, benzene, toluene, oils, common
cleaning products, ammonia from farms, etc. It is advisable to use the ventilated relative humidity sensor for environments with high humidity and great possibility of condensation in the sensor.

**TECHNICAL FEATURES:** • Power: +12 VDC (Minimum +10,5 VDC • Maximum +15 VDC) • Outlet signal: 4 ÷ 20 mA • Reading range: 0% ÷ 100% • Precision: ± 2% from 0% to 100% at 25 °C without sweat • Stability: ± 1% at 50% UR in 5 years • Maximum distance: 800 metres • Response time: 15 seconds • Protections: inverse current and overvoltage • Work temperature: -10 °C ÷ +60 °C • Work humidity: 0% ÷ 10%.

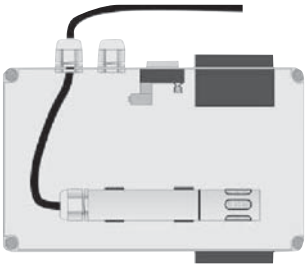



## VENTILATED RELATIVE HUMIDITY SENSOR

| Code | Description |
|---|---|
| FER602 | Humidity relative ventilation probe 4 - 20 ma |

### DESCRIPTION
This version of the relative humidity sensor includes a fan, with the circuit which is necessary to feed and protect it. With this fan, a continuous draught is forced on the sensor. As the sensor is placed in a continuous draught, even a 100% humidities can be measured with high precision, without having condensations which distort the readings. In this way, the reliability of the obtained readings is assured and the sensors can be adapted to any environment no matter how humid this is. It includes a high sensitivity and precision fan. It needs to be installed in horizontal position through the tongs we provide. It is suitable for environments with chemical steams such as isopropylene, benzene, toluene, oils, common cleaning products, ammonia from farms, etc.

**TECHNICAL FEATURES:** • 24 VAC ± 10% • Outlet signal: 4 ÷ 20 mA • Protections: short-circuit (1 A fuse) and overvoltage (24 V varistore) • Working temperature: -10 °C ÷ +60 °C • Working humidity: 0% ÷ 100% • Size: 230 x 140 mm.



# PROBE EC

## DESCRIPTION

Soil salinity affects the activity of the plant. The soil with a high salinity (in particular those with very sodium chloride), tend to get alkaline preventing the absorption of nutrients to plants.
The salinity in fertigation is determined by measuring the electrical conductivity (EC generally expressed in mS / cm at 25 ° C). Indeed, there is a direct relationship between conductivity and amount of salts (and therefore also of fertilizers) dissolved in water.
In practice, the probe measures the conductivity by applying a voltage between two electrodes and then measure the resistance of the solution. The 4-ring potentiometric method to measure the conductivity of different scales (traditionally it was necessary to have a two-pronged amperometric sensor specific for each scale) with a single probe.
The potentiometric method of measurement has several advantages compared to the amperometric:
linear readings on a wide scale, no bias, no need to clean any deposits.

## PROBES HI7635

**TECHNICAL FEATURES:** • Automatic temperature compensation from 0 to 50 ° C with NTC sensor; • Body polypropylene; • Operating temperature 0 to 80 ° C • Max. (at 25 ° C) 5 bar.

| Code | Description |
|---|---|
| FER418 | Probe EC threaded |

## PROBE HI3001

| Code | Description |
|---|---|
| ATR051 | Probe EC |

### TECHNICAL FEATURES

These 4-ring conductivity probes are equipped with platinum sensors and standard external thread ½" for in-line mounting. The protective cap is made of plastic Ultem ® and can be removed for quick maintenance. They can withstand temperature up to 80 °C and 6 bar pressure. Equipped with NTC temperature sensor inside.

| PROBE IN LINE - Data | |
|---|---|
| Temp compensantion | Automatic from 0 to 60°C with sensor NTC |
| Boyd | Ultem® |
| working temperature | 0 ÷ 80°C |
| Pressure max (a 25°C) | 6 bar |

## PROBE OELE EC

**TECHNICAL FEATURES:** • Temperature compensation;
• Maximum operating pressure: 6 bar • 5 meters of cable included.

| Code | Description |
|---|---|
| FER099 | Probe EC with mt.5 of cable |

# PROBE PH

## DESCRIPTION

The pH is an accurate indication of the acidity or alkalinity of soil, irrigation water and nutrient solutions.
The pH influences the growth of vegetable organisms, since the assimilation of the various nutrients is optimized at certain values. The majority of the plants has the ability to adapt to soil with a pH different from the optimal one. This, however, implies that stress has a negative impact on the metabolism of the plant and thus its productivity.
The scale ranges from 0 (very acidic) to 14 (very basic or alkaline). The pH value of 7 indicates a neutral solution. Generally in the range between 6.0 and 8.5 irrigation water can be used without risk of damage to crops.
Moreover, in addition to the problems of phytotoxicity, an abnormal pH can indicate the danger of closing devices erogator. In fact, some substances (eg iron and limestone) may precipitate, and to determine the fouling and then the filling of drippers, micro sprinklers etc

### COMBINATION PH ELECTRODE WITH EPOXY BODY

| Code | Body | Temp. max | Press. Max | Connection | Lenght cable |
|---|---|---|---|---|---|
| FER819 | Epoxy | 60°C | 6 bar | BNC | 9 m |
| FER821 | Probeholder Ø ½" | | | | |

### COMBINATION PH ELECTRODE WITH GLASS BODY

• Electrode gel and manufactured in epoxy resin;
• 5 meters of cable included;
• Electrode holder Ø ¾ "included.

| Code | Description |
|---|---|
| FER097 | Probe pH with mt 5 of cable |

# FLOWMETER

## DESCRIPTION

Sensor that measures flow speed. Provided with a 4-paddle rotor creating an impulse that is then turned into an outlet signal at a 50 Hz per m/s frequence (open collector). There are adapters for polyethylene, PVC and steel pipings, that put the sensor at the right distance from the internal side of the pipe. Once the speed of the liquid flow has been recorded, and by knowing the internal diameter of the piping the liquid is flowing in, many devices or control controllers can display the instant flow of a piping.

## TECHNICAL FEATURES

- Speed range: 0,3 ÷ 6 m/s
- Feeding: 3,3 – 24 VDC
- Outlet signal: frequency (open collector) of 50 Hz per m/s
- Cable lenght: 7,6 metres (extendable up to 300 metres)
- Maximum pressure: 10 bar at 38°C
- Materials: P.P.
- Protection degree: IP 67

| Code | Description |
|---|---|
| FER100 | Probe for speed and flow (flowmeter) |

| MIN. FLOW RATE AND CODE SADDLE CLAMP | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Code | FER770 | FER771 | FER772 | FER773 | FER774 | FER775 | FER776 | FER777 | FER778 |
| Ø mm | 50 | 63 | 75 | 90 | 110 | 125 | 140 | 160 | 200 |
| Min. $m^3/h$ | 2 | 3 | 4 | 6 | 9 | 12 | 16 | 19 | 30 |

# VERTICAL FLOWMETER

## DESCRIPTION

Measure fields graduated according to DIN norms, from 3 to 50.000 l/h. Graduated tubes from DN 10 to DN 65. Length of the tube from 165 to 350 mm.,depending on the model. Materials for (nearly) all the fluids: PVC-U, AISI 304, PVDF. Process automation with limt contacts and distance transmission of the measured value. Precision of indication according to VDI/VDE 3513 norms.

The materials, at low permeability, increase the measurement stability. Pressure level PFA10, materials highly resistant to bumps, and increased sliding force. At hermetic holding, end connections are provided with o-rings. They need little maintenance and are installed radially. The fluid (water, air, liquid or gas chemicals) goes vertically from the bottom to the top and lifts the float without any friction. The upper angle of the float itself (point of maximum diameter) directly shows the amount of flow on the scale of the graduated tube.

| RANGE IN L/H: | | | | |
|---|---|---|---|---|
| Code | Pic. | da | a | Ø - mm |
| FER120 | A | 30 | 300 | 20 |
| FER121 | | 50 | 500 | |
| FER2003 | B | 25 | 250 | |
| FER2000 | | 40 | 400 | 32 |
| FER2007 | | 200 | 1.200 | |

Installation: vertical, direction of the fluid from low to high

The conic graduated tube is provided with a l/h scale for water at 20°C in the standard version and with a % scale as well in the 350 series. It has two swallow-tailed external tracks, one with two mobile level indicators and the other for the possible assemblage of limit contacts. The float (standard in PVDF) and its lock are inserted in the measurement tube. For the 350 series there are two locks, a top and a bottom one. For automatic measurements the float is provided with an internal magnet which is absolutely watertight to the liquid to be measured.

# COUNTER OF FERTILIZER

| TECHNICAL DATA | |
|---|---|
| Lenght (mm) | 110 |
| High (mm) | 81 |
| Width (mm) | 77 |
| Weight (Kg) | 0,28 |
| Max working pressure (bar) | 0,5 |
| Max working temperature (°C) | 50 |
| Max flow rate (l/h) | 750 |
| Head loss (bar) | 0,12 |
| Min flow rate (l/h) | 70 |
| Male connection | ½" |
| Outlet EV volume control | |
| Register 6 digit total volume | |
| 3 indicators rotating flow rate | |
| Central pin leak test facility | |

| Code | FVR505 |
|---|---|

# TENSIOMETER

**DESCRIPTION**

The tensiometer is used to measure soil humidity, thus you can:
- avoid excessive irrigation and wasting of water and fertilizers;
- evaluate rain effects;
- measure the depth of water penetration into the soil;

**MODEL RA**
Tensiometer for automatic operation of solenoid valves by means of the control unit.

| Code | Model | Lengh. shaft |
|---|---|---|
| OSN150 | Standard | cm 30 |
| OSN151 | | cm 45 |
| OSN152 | | cm 60 |
| OSN130 | RA | cm 30 |
| OSN131 | | cm 45 |
| OSN132 | | cm 60 |

**FEATURES AND OPERATION**

The tensiometer is made up of a ceramic tip, a cylindric container closed and filled with water, a gauge (vacuum indicator whose unit of measurement is in centibar).
The tensiometer works as follows: the water in the irrometer reaches a balance with the water in the soil creating a tension. As the soil gets dry, the water in the tensiometer is sucked by the soil through the ceramic tip;
This operation allows the creation of a vacuum that will be measured by the gauge.
The tensiometergauge is graduated 0 to 100 centibar:
- 0 ÷ 10 centibar: the soil is waterlogged and, the situation keeping being the same, there is the risk of radical asphyxia.
- 30 centibar: it is the right time to begin irrigating in the case of a drip irrigation;
- 60 centibar: it is the right time to start traditional rain irrigation systems;
- 70 to 80 centibar: beginning of irrigation in the case of a soil with an average mixture;
- Limit of usage: over 80 ÷ 85 the tensiometer doesn't provide trustable results anymore.

# WATERMARK TENSIOMETER DIGITAL PLAYER

**DESCRIPTION**

More probes, positioned firmly in the ground, can be read from a single portable instrument reading that connecting / disconnecting rapidly with each probe;
Digital readout;
Converts the electrical resistance;
Accuracy and stability;
Probe readings in centibar suction;
Centibar range 0-200;
Exclusively solid state;
Does not dissolve in the soil;
Linear precision even in moist soils (below 50 centibar);
Not affected by low temperatures;
Self-compensating for normal salinity levels.

| Code | Description |
|---|---|
| FER603 | Humidity sensor for digital player |
| OPG1001 | Digital player |
| OPG1003 | Viewer and recorder probes with historical data |

| INTERPRETATION OF VALUES OF SUCKING IN CENTIBAR | |
|---|---|
| Centibar | Soil |
| 0 ÷ 10 | Saturated soil |
| 10 ÷ 30 | Il soil is adequately wet (except coarse sand soils) |
| 30 ÷ 60 | Sual range for irrigation (except for heavy clay soils) |
| 60 ÷ 100 | Usual range for irrigation (except for heavy clay soils) |
| 100 ÷ 200 | Il soil is becoming too dry for high-end production |

# METER POCKET pH / EC / TDS / Temperature

**DESCRIPTION**
Pocket instruments with all the features and functions of professional tools. Rugged, waterproof and floats perfectly in case of accidental fall into the water. Equipped with a large display two levels of reading. Calibration and automatic temperature compensation. Supplied with protective cap, batteries and instructions.

**TECHNICAL FEATURES**
Terms of use: 0 to 50 °C, RH max 100% • Battery Type / Life 4 x 1.5V / approx 100 hours of continuous use, auto-off after 8 minutes • Dimensions: 163 x 40 x 26 mm - Weight: 85 g.

## HI 98127
- Measured parameters: pH, temperature;
- Electrode: Replaceable with a snap;
- Scale: pH 0.0 to 14.0 pH - temperature from 0.0 to 60 °C (or 32.0 to 140.0 °F);
- Resolution: pH 0.1 pH - 0.1 °C (or 0.1 °F);
- Precision: pH (at 20 ° C) ± 0.1 pH - temperature ± 0.5 ° C (± 1 °F);
- Typical EMC Deviation: ± 0.02 pH pH - temperature ± 0.5 ° C (or ± 1 °F);
- pH Calibration: Automatic 1 or 2 points;
- pH buffers stored: 2 sets of 3 buffers each (4.01/7.01/10.01 pH and pH 4.01/6.86/9.18);
- Temperature compensation: automatic from 0.0 to 50.0 ° C (can be disabled).

| Code | Description |
|---|---|
| FERS001 | pocket pH |

## HI 98312
- Measured parameters: EC, TDS, temperature;
- Scale: EC from 0.00 to 20:00 mS / cm - TDS 0.00 to 10.00 g / L (ppt) - temperature 0.0 to 60.0 °C (or 32.0 to 140.0 °F);
- Resolution: 00:01 EC mS / cm - TDS: 0.01 g / L (ppt) - 0.1 ° C (or 0.1 ° F);
- Precision: EC / TDS (20 ° C) ± 2% F.S. - Temperature ± 0.5 ° C (± 1 ° F);
- Typical EMC Deviation: EC / TDS ± 2% F.S. - Temperature ± 1 ° C (or ± 2 ° F);
- EC / TDS calibration: automatic to 12.88 mS / cm;
- Factor conv. EC / TDS: adjustable from 0.45 to 1.00;
- Temperature compensation: automatic, beta adjustable from 0.0 to 2.4;
- Electrode: Replaceable;
- Low Battery: displayed.

| Code | Description |
|---|---|
| FERS002 | Pocket Conductiviter |

## HI 98130 COMBO
- Scale: pH 0.00 to 14.00 pH - EC from 0.00 to 20:00 mS / cm - TDS 0.00 to 10.00 ppt -
- Temperature 0.0 to 60.0 ° C (32.0 to 140.0 ° F);
- Resolution: 0.01 pH - EC 00:01 mS / cm - 12:01 ppt TDS - Temperature 0.1 ° C (or 0.1 ° F);
- Accuracy (at 20 ° C): pH ± 0.05 pH - EC / TDS ± 2% FS - Temperature ± 0.5 ° C (or ± 1 ° F);
- Typical EMC Deviation: ± 0.02 pH pH - EC / TDS ± 2% FS - Temperature ± 1 ° C (or ± 1 ° F);
- Comp. temperature: automatic pH - EC / TDS automatic with ß adjustable from 0.0 to 2.4% / ° C;
- Calibration: pH Automatic 1 or 2 points with 2 sets of memorized buffers (pH 4.01 / 7.01/10.01 or 4.01/6.86/9.18) - EC / TDS automatic to 1413 mS / cm and 12.88 mS / cm;
- Factor conv. EC / TDS: selectable from 0.45 to 1.00;
- pH Electrode: HI 73127 (replaceable; included) with renewable cloth junction EC / TDS probe: graphite is not damaged by salts and other corrosive substances and is not susceptible to deposits of salts present in the sample solution;
- Temperature sensor: stainless steel fully exposed reduces the response time of the instrument;
- In addition to its proximity to the probes pH / EC / TDS increases the accuracy of the measurements automatically compensating.

| Code | Description |
|---|---|
| FERS003 | Tester pH-EC-TDS-temp. |

## ► ACCESSORIES

# SOLENOID D 132

D132 2/2 - ELETTROVALVE - DRY - close (N.C.) D132 Series - electromagnet Z110A - G ½" o ⅜"

**TECHNICAL FEATURES**
Direct action, complete separation of the actuator from the fluid, which remains in contact only with the body valve and the obturating lever. Apt for the interception of liquid and gas fluids compatible with the materials that makes it up. It can be disassembled for inspection. the parts that support the sliding friction are properly covered with self –lubrificating PTFE based material.

**ASSEMBLY**
In any position, preferably with the vertical electromagnet directed to the top.

**VALVE**
Body printed in strengthened PPS (Poliphenilsulphur).
Elastomer obturating lever as in the table.
Fluid temperature from -10°C to +90°C. Max viscosity 5°E
(~37 cStokes or mm 2/s). Opening time ~30 ms. Closing time ~30 ms.

| Code | Model | Description |
|---|---|---|
| OVA850 | D132 | Elettrovalve fpr fertigation |

**ELECTROMAGNET**
For continuous service apt for a.c. (alternating current) o d.c. (direct current).
Coil class "F" (+155°C) with thread class "H" (+180°C), vacuum-packed soaked with polyester resin and absorbed in PBT (polibutylene-terephthalate) glass loaded.
Room temperature from -10°C to +60°C.
Regular winding tensions 24/50Hz-110/50Hz (120/60Hz)-230V/50Hz - 12-24 V c.c.
Tolerance on nominal tension +10% -15% c.a. and +10% -5% c.c.
Rapidly couplingelectric connections (DIN 46340) or for 3 pole connector (DIN 43650).
Protection degree IP65 (EN 60529) with connector provided electromagnet.

# SOLENOID S 11

**DESCRIPTION**
Valve body gaskets and external parts in plastic materials
No metal in contact with the fluid, or the external environment
Standard accessories: manual control, indicator light, bracketing nuts
Reliability and durability thanks to the simplicity of the principle of operation
Can be installed in any position.

**TECHNICAL SPECIFICATIONS**
- S11 solenoid valve 2/2 (two-way two-position) DN 2-4-6-8;
- Working principle: shutter lever mechanism;
- Maximum ambient temperature: 50 °C;
- Maximum fluid viscosity range: 5 °E;
- Closing time and opening time: ~ 20 ms;
- Unionized, female bonding from d 10 to 16 mm or threaded G1 / 4 "to ⅜";
- Available ports according to BS Standards ASTM;
- Body Material: PVC - PVC-C (only bonding);
- Seal materials: EPDM or FPM;
- Voltages: 230-110-48-24 AC / DC 110-48-24-12 / Voltage Tolerance - 15% + 10%;
- Power consumption: 12 VA for S11 AC / DC 10.5W for S11;
- Protection class: IP 65;
- Service 100% ED;
- Available functions: Normally closed.

| HEAD LOSS AND FLOW | | | | |
|---|---|---|---|---|
| DN | 2 | 4 | 6 | 8 |
| PFA | 10 | 6 | 4 | 2 |
| l/m with 1 bar head loss | 2,5 | 6,5 | 11 | 13,5 |

DN nominal internal diameter in mm

PFA nominal pressure in bar
(max working pressure 20° C - water)

| Code | Model | Volt | Description |
|---|---|---|---|
| OVA865 | S11 | 24 | Solenoid for fertigation |
| OVA866 | | 12 | |

## PAN TANKS FOR DRINKING WATER

SEE ON PAGE 174

## SOLAR PANELS FOR RIGID CONTROL•

The basic element of solar panels is the cell, which converts solar radiation directly into electricity. The photovoltaic modules are made from monocrystalline silicon cells (black) or polycrystalline (blue) connected in series and assembled by hot rolling of tempered glass and aluminum frame.
The cutting-edge technology with which they are built is a guarantee of reliability, excellent resistance to atmospheric agents, with an operating time of more than 25 years.

**TECHNICAL SPECIFICATIONS**

- Photovoltaic panel made up of silicon cells in series;
- Mounted on aluminum frames;
- Protected with tempered glass;
- Wind load up to 200 km / h;
- Output voltage 12V DC or 24V DC;
- Output terminals and cable glands with IP65 weatherproof box output;
- By-pass diode for smooth operation of the panel in the case of shading.

• **Products available on request**

FEATURES INSTALLATION IRRIGATION AND YOUR REQUIREMENTS TO SIZE AN APPROPRIATE SYSTEM FERTIGATION

Company – Name and Surname

Adress

City

Phone

E-Mail

FLOW OF THE IRRIGATION SYSTEM:

MAX:

MIN:

WORKING PRESSURE OF THE IRRIGATION SYSTEM:

MAX:

MIN:

PH CONTROL:

REQUESTED:

- YES
- NO
- ONLY READ
- AGITATOR

PH OF THE WATER:

MAX PH REQUIREDX:

MIN PH REQUIRED:

ACID THAT YOU WOULD LIKE TO USE:

- NITRIC
- PHOSPHORIC
- SOLPHORIC
- CITRIC

CONTROL OF THE FERTILIZER:

REQUESTED:

- YES
- NO
- EC PROBE
- PROPORTIONAL
- VOLUME
- ONLY EC READ
- AGITATORS

N. FERTILIZERS TO USE:

EC OF THE WATER:

MAX EX REQUESTED:

MIN EX REQUESTED:

CROPS:

- MONO CROPS
- DIFFERENT CROPS SIMULTANEOUS
- ON FIELDS
- INDOOR

IRRIGATION:

- DROP
- MICROSPRINKLERS
- MIXED

N. SECTORS:

N. ELECTROVALVES

N. ELECTROVALVES CAN BE ACTIVATED SIMULTANEOUS

CUT AND SEND

SCARABELLI IRRIGAZIONE s.r.l. • Via Viadagola 48 • 40057 Granarolo dell'Emilia (BO) • Tel +39(0)51 763.363 • Fax +39(0)51 763.397 • www.scarabelli.it • info@scarabelli.it

I WISH TO RECEIVE BUSINESS INFORMATION

My data

Surname and Name

Company

Address

City

Phone

E-Mail

I am:

- [ ] DEALERS
- [ ] INSTALLER
- [ ] TECHNICAL STUDIO
- [ ] PUBLIC OFFICE
- [ ] PRIVATE
- [ ] OTHER:

I am also interested in:

- [ ] PUMPS
- [ ] FILTERS
- [ ] PIPES
- [ ] VALVES
- [ ] DRIP LINE
- [ ] MICROSPRINKLERS
- [ ] SPRINKLERS
- [ ] AUTOMATION
- [ ] FITTING
- [ ] OTHER:

CUT AND SEND

Send to:
SCARABELLI EXPORT srl
Viadagola, 48 - 40057 Granarolo dell'Emilia - Bologna

# TERMS OF SALES

**ORDERS**
Orders sent to Scarabelli Irrigazione Ltd , are to be considered valid only after validation and acceptance of the Sales Department
Scarabelli Irrigazione Ltd can prepare the order in several times without this giving the right to cancel the order.

**PRICE**
Prices exclude taxes.
The prices can be changed unilaterally by the Scarabelli Irrigazione Ltd, without notice, in consequence of the overall market, and for other causes.

**DELIVERY**
Delivery delays due to force majeure, accident or act of third, or otherwise, does not justify the cancellation of the order and, accordingly, no compensation and or damages that may be requested by the purchaser who must pay what written in the order.

**SHIPPING**
The material travels at the sole risk of the buyer. The buyer, in case of disputes, must immediately report the incident to the carrier for any, related responsibilities by registered letter and send a copy to Scarabelli Irrigation Ltd.

**PAYMENT**
Invoices must be paid in the manner established and accepted in the order.
For orders of special material, considered non standard, we require one-third of the value of goods purchased to send together with the order accepted.
In case of payment delay, we will charge interest according to the italian law D.Lgs 9.10. 2002 n. 231, starting in the notice payment.

**PROPERTIES OF THE MATERIAL**
The ownership of the goods delivered remains of Scarabelli Irrigazione Ltd until full payment of the invoice.
Risks relating to the things sold passes from the seller to the buyer from the moment of delivery.
In the case of unjustified payment delay, Scarabelli Irrigazione Ltd can require return of the material delivered.

**WARRANTY**
Buyer can report defects within eight days of the discovery, on pain of forfeiture, and has the limitation period of one year from delivery for asking the warranty.
The warranty is limited to replacement or repair of the material, however, implies the possibility to claim for compensation and / or damages and / or termination of the contract.
The warranty excludes failures caused by errors in the electrical, lack of adequate protection from removal and replacement or tampering, false maneuvers and in any case by the failure to comply with the limits listed or instructions provided by Scarabelli Irrigazione Ltd.
The warranty can not be recognized and therefore not in force also in the following cases:
- Failures caused to materials for corrosion or abrasion of each type and nature or cause of the pumped liquid;
- Failure of proper functioning caused by installations not performed in a workmanlike manner;
- In cases where the customer is in arrears with payments.

The warranty does not recognized in the case that the customer does not provide information on the conditions of use or any other information to clarify the cause of the fault.
When warranty is claimed, it must be shown a document proving the date of shipment or the code number on the identification plate on the material, or the label on the packaging, to find the date of manufacture.
It is excluded by warranty material repaired or tampered with by anyone not authorized by Scarabelli Irrigazione Ltd.
For products described in Section L-Fertigation, the following specifications:
duration 3 months warranty for materials subject to deterioration chemical / mechanical (such as pH sensor) under normal conditions of use; the installation of appropriate control systems for supply voltages (stabilizers) and disconnect from the mains supply or distribution in the case of plants located in areas prone to lightning strikes are binding for the validity of the warranty conditions.
Scarabelli Irrigazione Ltd disclaims any liability for damage to property and injuries that can be caused by our products.
The material must be sent to the Scarabelli Irrigazione Ltd and delivery must be payed by the customer.
The warranty is not recognized in the case of extreme external use with chemical conditions and / or physical particularly aggressive, such as, sand wells, aquifers ferruginous, acidic environments, etc...
Advice and support before and after sale: the Scarabelli Irrigazione assumes no responsibility for possible free consulting services and technical assistance, agronomic and planning (eg preparation of explanatory hydraulic diagrams, etc..) provided as a courtesy, On the occasion of the sale of its products.
Complaints: Any complaints relating to the supply must be received in writing strictly within 8 days from delivery of the goods.
Returns: Any material returned (warranty or otherwise) must always be authorized by the marketing department.
On the release must be reported the reference of the approval.
The shipment must be payed by the customer.
If the return is not due to our sins, it will be accepted with a 10% deduction on the credit note.

**JURISDICTION**
For the resolution of any dispute arising from the interpretation and / or execution of this contract, the parties expressly declare and identify in Bologna, the competent court, relinquishing any exception and reservation of jurisdiction.

**SCARABELLI IRRIGAZIONE S.r.l.**

**N.B. – The information and specifications of the products listed in this publication can be changed at any time without notice. The photos are indicative of the product supplied.**

**SCARABELLI IRRIGAZIONE s.r.l.**
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